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NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

SOCIAL, ECONOMIC AND BEHAVIORAL DIFFERENCES AMONG ENLISTED PERSONNEL BASED ON AGE AT SERVICE ENTRY

by

Steve M. Kreutner

October 1982

Thesis advisor: G. W. Thomas

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length of service, contract preference, occupational choice, first-term attrition, dependent status, military compensation, re-enlistment and reserve entry intent. Perceptions of civilian employment, race relations, promotion and military life were also investigated. Differences between age cohorts were found in the areas of recruit quality and first-term retention.

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Social, Economic and Behavioral Differences Among Enlisted Personnel Based on Age at Service Entry

by

Steve M. Kreutner
Lieutenant, United States Navy
B.S., Southwest Missouri State College, 1975

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

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October 1982

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MONTEREY, CALIF. 93940

ABSTRACT

The purpose of this thesis was to examine the behavior of non-prior service personnel in the military based on age at service entry. Crosstabulation and Multiple Classification Analysis were used to study historical data on naval personnel supplied by the Defense Manpower Data Center, Monterey and survey information of DoD personnel gathered by the Rand Corporation in 1978. Areas of study included mental aptitude, length of service, contract preference, occupational choice, first-term attrition, dependent status, military compensation, re-enlistment and reserve entry intent. Perceptions of civilian employment, race relations, promotion and military life were also investigated. Differences between entry age cohorts were found in the areas of recruit quality and first-term retention.

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I. INTRODUCTION

A. THE PROBLEM AND PURPOSE

The military services have traditionally relied on individuals from younger age groups who are initially entering the labor market to provide the required numbers of recruits to maintain desired force levels. The 1980's will have declining sizes of the population age cohorts the United States military has historically targeted as its' primary enlisted age [Ref. 1]. This declining 18-21 year old pool may require substantial increases in the percentages of Americans recruited between the ages of 18 to 21.

In addition to decreased total numbers of individuals available in the total enlistment supply pool, the supply of high mental quality individuals may also be a future problem. Fernandez's study of enlisted supply, [Ref. 2], projected accessions in mental categories I and II to be only 56 percent as great in 1984 as they were in the service's best recruiting year since the end of the draft, FY76. (This forecast was made with an assumed macroeconomic scenario of a much improved economy.)

The available enlistment supply could be increased by enlarging the current concept of recruit entry age cohorts to include individuals in their mid-to-late twenties. In addition to expanding the numbers of individuals considered

available for recruitment, the population of older individuals may also provide a greater source of high quality recruits than the younger aged cohorts traditionally targeted for military recruitment programs. Analysis of the Vocational Aptitude Battery administered in 1980 to a cross-section of American youth aged 18 to 23 [Ref. 3], indicates that AFQT test scores of the 1980 youth population are higher for the older age groups. In addition, a United States Army Recruiting Command Memorandum [Ref. 4], reports that individuals over the age of 21 who join the Army are of substantially higher mental aptitude than are 17-through-21 year old entrants.

Most current models of recruitment and first term behavior of enlistees are predicated on the assumption that all recruits are basically the same age. Differences in perceptions and behavior of a wider age cohort could substantially alter current manpower projections.

If one ascribes to theories of personality development presented by Freud, Jung and Erikson among others, then age can certainly be considered a factor in personality development. Levinson, as discussed in Senger [Ref. 5], in his study of adult years divided life into four overlapping periods: Childhood and Adolescence (up to twenty-two years old); early adulthood (ages seventeen to forty-five); middle adulthood (ages forty to sixty-five); and late adulthood (age sixty onward). If one feels Levinson's theory has any

validity, then the services may be accessing individuals from two different stages of personality development.

This study utilizes survey data compiled by the Rand Corporation and historical personnel data held in Defense Manpower Data Center cohort files to examine the behavior of individuals based on age at service entry. The analysis was conducted comparing data from behavioral and economic indicators of cohorts stratified by age at service entry.

B. HISTORY AND BACKGROUND

The military forces are authorized to access individuals of ages 17-35. However, the accent on youth and vigor as a desired trait of young recruits has ignored all but the youngest age levels of manpower supply available to meet DoD requirements. As illustrated by the following table compiled by Binkin [Ref. 1], as far back as 1920, the military establishment has relied on young people to provide the bulk of the personnel for the military establishment. The median age of the force has remained relatively constant over a sixty-year period. During this period the military has undergone tremendous changes in areas such as tactics, weapon system design and force composition. In 1920, 60 percent of all enlisted men were in noncombatant jobs [Ref. 1]. At that time an argument for youth could be justified on the grounds that these support troops could easily be integrated into combat units if required. The special skills a rifleman

TABLE I

Age Distribution of Male Military Personnel on Active Duty

Age	1920	1930	1940	1950	1960	1970	1976
Under 20	23.4	13.3	19.0	19.1	17.0	13.6	16.8
20-24	37.3	36.8	40.9	36.2	36.7	49.7	37.0
Over 24	39.3	49.9	40.1	44.7	46.3	36.7	46.2
Median age	23	24	24	24	24	23	24

Source: Youth or Experience? Manning the Modern Military.

or gunner required for trench warfare were acquired in basic training. This philosophy was still viable in World War II.

The romantic image of surrounded mechanics, clerks and cooks of Bastone taking up rifles and holding off panzer divisions still holds a certain fascination with the modern military and public. In reality, however, the shipboard 40mm cannon that mess specialists were able to man in World War II have been replaced by missile systems and computer controlled gatling guns. Ashore, today's Army cook would quickly discover that the anti-tank gun his World War II counterpart found easy to man in the Ardennes has been replaced with TOW missiles.

The need for a youthful force is also a dubious requirement in view of the service's present reliance on the total force concept. In the event of war, the subsequent mobilization of selected and individual reserves would result in the median age of the force increasing due to the influx of large numbers of personnel, most of whom have already served in the military and are already past the age of the present targeted entry cohort of enlisted personnel. As reported to the Armed Services Committee [Ref. 6], in the event of intense combat expected in a NATO-Warsaw Pact confrontation, about 200,000 additional men would be needed to replace casualties during the four or five months before the army could train volunteers or draftees and assign them to combat units.

In addition to the force aging due to wartime mobilization, any program of lateral entry would result in a large influx of older entrants which would also result in an older force. Lateral entry does have certain attractions in an all volunteer environment where comparability with the private sector rather than conscription is the method of obtaining recruits. Entry at other than the lowest level of the military structure, while a break from traditional military practice, would reduce training costs. As reported by Muller [Ref. 7], the service's current methods of recruiting candidates for technical ratings have contributed to the development of personnel shortages. This has occurred at the same time the technical complexity of equipment has increased, thus creating critical problems of both quality and quantity recruiting shortfalls.

The Navy has experimented with lateral entry through the Direct Procurement Enlistment Program (DPEP). In a performance assessment of the FY 78/79 cohort by Biegler [Ref. 8], DPEP was considered a viable means of providing the Navy with skilled technicians. However, the DPEP FY 78/79 cohort contained only 120 individuals. Another study which the Navy is conducting is the pilot program entitled "Lateral Entry Accession Program, (LEAP)", which will target 13 Navy ratings for advanced placement entry of older enlistees. The Navy intended to begin accession of lateral entrants under LEAP in August of 1982 [Ref. 9].

Mobilization, changes in recruiting policy or the implementation of lateral entry programs could result in recruit cohorts that are significantly older than the average age of individuals who are currently being recruited. Significant variance in behavior or background related to entry age could impact on present force policy. For example, differences in retention rates would affect future demand for manpower. This study examines survey and historical data stratified by age at service entry of individuals who entered the service since the advent of the AVF. While this study does not examine the two other sources of potential enlisted manpower supply, prior service individuals and the civilian sector that chose not to enter the service, older aged entrants to the service do provide a sample of the behavior and intentions of individuals who have been recruited into the Services.

C. DATA BASES AND ANALYSIS

The study employed two data bases: (i) historical data from Defense Manpower Data Center (DMDC) files located at Monterey, California, and (ii) the 1978 DoD Survey of Officers and Enlisted Personnel which was conducted as part of the Rand Corporation's manpower, mobilization and readiness program, sponsored by the Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs & Logistics).

DMDC provided data on non-prior service individuals who were in the Navy from fiscal year 79 through fiscal year 81

by accessing the DMDC active duty cohort file. The Navy was selected as a prototypical service to inspect certain trends in relation to entry age. The active duty cohort file provided the following information stratified by age at entry; AFQT at entry for annual accessions of males and females to the navy, length of estimated term of service contracts at entry, cohort attrition rates and annual stocks in the partitionment of ratings into the skill levels of semi-technical, technical and highly technical ratings; (see Appendix A for a list of ratings in each group).

Historical information from DMDC was provided upon request by the Naval Liaison Officer located at the DMDC office in Monterey. The format for their analysis generally was cross tabular with entry age as one of the variables of interest.

Documentation for the Rand survey is contained in [Ref. 10], which is the source utilized in the description of the Rand survey data base. The DoD survey was administered to personnel in all services and contains information to support research in manpower issues such as retirement, pay, promotion, retention and attitudinal factors on the military environment. Four different questionnaires were used in the survey. Forms one and two were administered to enlisted personnel, and forms three and four were given to officers. Form one asked questions concerning economic issues, reenlistment options, retirement options and perceptions of civilian opportunity. Form two asked questions concerning

military life such as rotation experience, promotions and utilization of women. This study examined data from form one and form two of the survey.

The Survey was issued in late January 1979, worldwide to men and women in all four services. Data collection was completed in June 1979.

The basic sample stratification variable for the survey was service. Within each service, the enlisted samples were further stratified by years of service. The enlisted sample was further stratified by time remaining in enlistment contract. Also, supplemental samples of enlisted women and Blacks were selected to provide further analysis.

Three factors constrained the DoD sample design formulated for the survey: the need for a statistically significant number of usable responses from each stratification cell, the expected response rate of sampled individuals and budget limitations. Based on these constraints the sample design for form one required 1,000 completed usable questionnaires from those respondents who were within one-year of completing their enlistment term (ETS) and who had less than five years of service and 1,000 completed usable questionnaires from those respondents who were within one-year of ETS and who had between five and eight years of service. In addition supplemental samples of enlisted females and Blacks were required in order to produce a total of 500 usable questionnaires from each service for each of these

two groups. The response rate for form one was 108.9 percent of the sample size requirement and form two response was 106.2 percent of the sample size requirement.

Analysis of the unweighted 1978 DoD survey data was carried out on the Naval Postgraduate School's IBM 3033 computer. The Statistical Package for the Social Sciences (SPSS) was used in all automated, statistical analysis [Ref. 11].

II. FINDINGS FROM DMDC DATA

A. MENTAL APTITUDE

The DMDC Active Duty Cohort Tracking File was utilized to look for differences in the quality of accessions as a function of entry age. The Defense Manpower Data Center at Monterey supplied crosstabular information on requested variables and cell stratifications of interest. These were then analyzed based on the criterion of proportional differences between the age cohorts in relation to the variable of interest. The study employed data which were comprised of all navy accessions from FY78 through FY81. For the purposes of this study the measure of quality is the Armed Forces Qualification Test (AFQT). The AFQT is used to partition individuals into mental categories I through V which are used to determine eligibility for enlistment and to establish qualifications for assignment to specific military jobs. Persons who score in categories I and II tend to be above average in trainability; those in categories IIIA and IIIB, average; those in category IV, below average; and those in category V, markedly below average and, under current policy, are not eligible for enlistment. The services prefer enlistees in higher AFQT categories because training time and associated costs are lower and these recruits are more likely to qualify for specialized training in a greater number of occupational areas [Ref. 3].

The DMDC data were used only on information available on the Navy rather than for all the Services. Age differences by Service were not investigated. Therefore, the results of this section should be viewed as indicative of behavior trends and not considered a conclusive indicator of behavior trends DoD wide. An analysis of all branches may yield trends that are not revealed by the current analysis. Most likely, some relationships of entry age may be service specific.

The null hypothesis of no difference in AFQT scores of naval personnel based on entry age was tested by the examination of all Navy accessions for FY79 through FY81. The results of the analysis for males are presented in Table II and in Table III for females.

Three different years were examined to insure any indicated trends in AFQT scores existed over time and were not peculiar to conditions that existed for only one fiscal year. Also, male and female accessions were examined separately due to differences in recruiting policy based on gender [Ref. 12].

Historical data indicated that for both males and females, on average, entry age is related to AFQT performance. Moreover, as entry age increased for both the male and female cohorts, AFQT performance increased. Differences between proportions of category I and II AFQT groups for 17-19 and 25-35 year olds varied between 32 and 51 percent

TABLE II

AFQT at accession, by Entry Age (Males), U.S. Navy

(% of Age Cohort in AFQT Group)

FY 79

AFQT Group	Age at Entry 17-19	20-21	22-24	25-35	Total in AFQT Group
I & II	32	38	45	53	35
IIIA	22	19	19	18	21
IIIB	24	20	18	17	23
IV	22	23	18	12	21
Total in Age Cohort	52355	10679	6275	3800	73,109

FY 80

AFQT Group	Age at Entry 17-19	20-21	22-24	25-35	Total in AFQT Group
I & II	34	41	48	55	38
IIIA	24	21	20	18	23
IIIB	24	19	17	16	22
IV	18	19	15	11	17
Total in Age Cohort	54489	13487	7869	5324	81169

FY 81

AFQT Group	Age at Entry 17-19	20-21	22-24	25-35	Total in AFQT Group
I & II	35	49	48	56	39
IIIA	25	21	20	20	23
IIIB	27	23	21	17	25
IV	13	07	11	07	13
Total in Age Cohort	56313	15127	9027	6557	86924

TABLE III

AFQT at accession by Entry Age (Females), U.S. Navy

(% of Age Cohort in AFQT Group)

FY 79

AFQT Group	Age at Entry 17-19	20-21	22-24	25-35	Total in AFQT Group
I & II	33	42	47	53	39
IIIA	26	26	25	20	26
IIIB	32	25	23	22	28
IV	09	07	05	05	07
Total in Age Cohort	4953	1837	1364	734	8888

FY 80

AFQT Group	Age at Entry 17-19	20-21	22-24	25-35	Total in AFQT Group
I& II	29	37	48	52	35
IIIA	24	23	23	22	24
IIIB	30	27	22	19	27
IV	17	13	10	07	14
Total in Age Cohort	6052	2189	1519	946	10707

FY 81

AFQT Group	Age at Entry 17-19	20-21	22-24	25-35	Total in AFQT Group
I & II	34	39	47	77	40
IIIA	26	28	23	10	25
IIIB	30	28	23	19	27
IV	10	08	06	03	08
Total in Age Cohort	5168	2105	1569	1189	10031

in FY79 for males, and 33 to 53 percent for females. In FY79, for example, the Navy accessed a total of 73,109 males. Thirty-five percent of those males were in mental category I or II, 44% were in mental category III and 21% were in mental category IV. Of those males accessed in FY79 that were between the age of 25 to 35, 53% were in mental category I or II, 35% were in mental category III and only 12% were in mental category IV. In addition, even in FY81, a year in which 69% of the total male accessions were of mental category I or II, the older entry cohorts were still above the mean with 70% of the 20-21 year olds in mental category I and II, and 77% of the 25-35 year olds in mental category I or II.

This pattern of increasing aggregate AFQT scores with increasing entry age, indicated that, on average, older entrants are better than 17-19 aged entrants based on this measure of quality. The findings of the AFQT by entry age analysis were based on the set of total navy accessions over three fiscal years.

B. PREFERRED ENLISTMENT CONTRACT LENGTH

An important factor in the initial enlistment decision affected by entry age may be length of time an individual is willing to serve on an enlistment contract. While most initial service obligations are for four years of service, six year initial service contracts are required for ratings

requiring extensive technical training. Individuals who obligate for an additional two years of service trade the greater flexibility of a four year contract for the increased level of technical training obtained through a six year obligation. The results of crosstabulation of the length of the initial estimated term of service (ETS) contract by entry age, presented in Table IV, indicated that for all navy accessions from FY78 through FY81 the 22-24 and 25-35 entry age cohorts had a greater propencity to enlist for four-year ETS contracts than the two younger entry age cohorts.

Differences between 17-21 and 22-35 aged entrants indicated a pattern of preference for four-year service obligations for the four years examined, FY78 through FY81. This pattern of preference for four-year ETS contracts was most pronounced for the oldest entry age cohort from FY79 through FY81.

If the length of obligated service alone resulted in the higher percentage of older entrants in four-year ETS contracts in comparison to the younger age cohorts, then any change in service policy that would allow shorter length of initial obligated service contracts could increase the percentages of older aged entrants to the Navy. However, required length of service is also a function of occupational choice. For example, ratings in the advanced electronic and advanced technical field require six-year ETS contracts. Also, ratings in the nuclear field are limited to entrants

TABLE IV

Estimated Term of Service (ETS) length by Entry Age

(% of Age Cohort in ETS Group)

FY 78

Length of ETS	Age at Entry 17-19	20-21	22-24	25-35	Total
Four Year ETS	79	79	81	81	79
Six Year ETS	21	21	19	19	21
Total in Age Cohort	59839	11753	6193	2532	78317

FY 79

Length of ETS	Age at Entry 17-19	20-21	22-24	25-35	Total
Four Year ETS	78	78	80	81	78
Six Year ETS	22	22	20	19	22
Total in Age Cohort	55881	11700	6273	2698	76552

FY 80

Length of ETS	Age at Entry 17-19	20-21	22-24	25-35	Total
Four Year ETS	83	83	84	86	83
Six Year ETS	17	17	16	14	17
Total in Age Cohort	58478	14591	7730	3505	84304

FY 81

Length of ETS	Age at Entry 17-19	20-21	22-24	25-35	Total
Four Year ETS	83	82	85	84	83
Six Year ETS	17	18	17	16	17
Total in Age Cohort	59600	16201	8801	4713	89315

under the age of 24 [Ref. 12]. Further study that would control or separate the effects of occupational choice would be required to confirm the effect of service contract length on the enlistment decision.

C. OCCUPATIONAL CHOICE

The all volunteer force allows individuals who enlist in the service to select not only the branch of service an individual prefers but also allows an individual a selection of occupations within the service. Occupational choice is a function of personal preferences, the physical and mental requirements for the desired rating and the number of training billets available for the desired occupation. An individual has the option of not enlisting or postponing the enlistment decision if the desired occupation is not available at the time he is making the enlistment decision at the recruiting station.

The DMDC Active Duty Cohort Tracking file was used to test the null hypothesis that there is no difference on the basis of entry age as to what rating individuals are assigned. Ratings were grouped by skill categories and by length of initial obligation. Due to differences in the length of training pipe-lines for various Navy ratings and the subsequent differences between the time of accession and the awarding of a rating, annual accession or personnel flow information were not considered appropriate for the analysis.

The end strengths for each fiscal year were utilized to provice a "shap-shot" of the total numbers of individuals in each of 96 navy ratings used in the analysis. This study, therefore, made no allowances for length of service, Navy rate or what enlistment contract the individuals were serving at the end of the fiscal year.

The cohort data contained both males and females. The limited billets available for women in ratings which traditionally entail a high proportion of sea duty would affect female assignment. This analysis also did not account for differences in required and actual manning levels of each rating. The assignment decision would be affected by the greater need to fill ratings that were critically undermanned than to fill those ratings that were not experiencing manning problems.

The analysis grouped 96 Naval Ratings into three categories of skill requirements. While these three groupings simplify the presentation of the analysis results, the reduction of rating categories from 96 to 3 masks much of the complexity in the selection process to individual ratings.

Even in view of the above mentioned factors which tend to mask factors in the selection of individuals to ratings, the results of the analysis, presented in Table V, indicate that entry age may be a factor in what rating individuals enter. (See Appendix A for a listing of ratings by skill category grouping.) For the three fiscal years examined,

TABLE V

Rating Classification by Entry Age

(% of Age Cohort in Classification Group)

FY 79

Technical Classification	Age at Entry 17-19	20-21	22-24	25-35	Total
Semi-Technical	17	16	18	17	17
Technical	72	74	73	73	72
High-Technical	11	10	10	09	11
Total in Age Cohort	176376	47836	24729	11263	260212

FY 80

Technical Classification	Age at Entry 17-19	20-21	22-24	25-35	Total
Semi-Technical	20	20	21	24	21
Technical	63	65	64	62	63
High-Technical	17	15	15	14	16
Total in Age Cohort	199703	55580	31789	14845	301917

FY 81

Technical Classification	Age at Entry 17-19	20-21	22-24	25-35	Total
Semi-Technical	20	21	28	25	21
Technical	63	64	78	59	63
High-Technical	17	15	15	14	16
Total in Age Cohort	201359	59341	27847	17294	312841

the percentage of the 22-24 and 25-35 aged entrants were equal or above the percentage of total individuals in the semi-technical ratings and below the percentage of total individuals in the high-technical ratings.

In view of the demonstrated superiority of older entrants in terms of AFQT scores found in the previous analysis, it was anticipated that larger proportions of the older entrants would be in the high-technical category in comparison to the younger entrants. This analysis indicated that the reverse is true. This may indicate that, while on average the older entrants are in higher AFQT groups, older entrants are assigned to ratings that, in the aggregate, require the lowest AFQT scores. If this pattern does exist, then the Navy is not optimally using the capabilities of older entrants.

Another possible explanation for older entrants occupying an equal or higher proportion of semi-technical Navy ratings in relation to younger entrants may be a preference for shore duty. Older entrants may prefer clerical duties that are inherent in some semi-technical ratings and may join the Navy on the condition they are assigned to these ratings. Further analysis of the distribution of age in individual semi-technical ratings would be required to confirm the conjecture. Some semi-technical ratings, Boatswain's Mate for example, entail a large amoung of physical labor and time at sea. In terms of job description, such ratings are not equivalent to other semi-technical ratings such as Yeoman or Personnelman, which are more sedentary in nature.

To investigate preferences of enlistees for different lengths of ETS contracts, two further crosstabulations of end strengths as of FY81 were made. These were done using the DMDC Cohort Tracking file to separate the ratings that require six-year ETS contracts from those that require four-year ETS obligations. (See Appendix A for a listing of ratings requiring four-year and six-year initial ETS contracts by skill category.) While this analysis did not control for such administrative effects as the oldest entry age cohort being limited from entry into nuclear field ratings [Ref. 12], the results of the crosstabulations indicated differences in the proportions of individuals in skill categories based on entry age. The results of the analysis are presented in Table VI for those of four-year ETS contracts, and in Table VII for those of six-year ETS contracts.

TABLE VI

RATING CLASSIFICATION (4 ETS) BY ENTRY AGE

(% of Age Cohort in Classification Group)

FY 81 Technical Classification	Age at Entry 17-19	20-21	22-24	25-35	Total
Semi-Technical	24	25	28	29	25
Technical	71	71	68	67	71
High-Technical	05	04	04	04	04
Total in Age Cohort	419272	37138	22595	12279	191284

The analysis of end strengths as of FY81 indicated that the 22-24 and 25-35 aged entrants held high technical skill category ratings in lower percentages of the age cohort than the 17-19 age entrants for those individuals serving on a four-year ETS contract. However, those individuals serving on six-year ETS contracts had larger percentages of the 22-24 and 25-35 entry age cohorts in high skill category ratings in relation to the 17-19 year entrants. This indicates that while previous analysis indicated older individuals enlist in larger proportions for four-year ETS contracts than the younger entrants, older entrants who do enlist for six-year ETS contracts enlist in the high technical skill ratings in much greater proportions than do the younger entrants that also enlist for six-year ETS obligations. The current analysis is further complicated by noting that the results of Table VII imply that over 30 percent of the over-20 entry aged groups were in six-year ETS ratings while less than 15 percent of the 17-19 entry aged cohort were in six-year ETS ratings in FY81. Further analysis needs to be done to distinguish the time horizon choices from the occupational skill choices.

The higher average AFQT scores of the older entry cohorts than the younger entrants would enable greater numbers of older entrants to meet the high mental requirements for the high technical ratings. Possibly, attrition from training schools may be higher for younger entrants which would

TABLE VII

RATING CLASSIFICATION (6 ETS) BY ENTRY AGE

(% of Age Cohort in Classification Group)

FY 81 Technical Classification	Age at Entry 17-19	20-21	22-24	25-35	Total
Semi-Technical	17	16	14	17	16
Technical	44	45	45	33	44
High-Technical	39	39	41	50	40
Total in Age Cohort	73229	19148	10799	4418	107594

result in larger percentages of older entrants, in comparison to the younger cohorts, being awarded high technical ratings. Also, occupational selection may be a factor in the different behavior of four-year ETS and six-year ETS contract preferences of older aged entrants. Older entrants may prefer an initial term of service of only four years. Older entrants that do obligate themselves for a six-year ETS contract may have a tendency to do so because of a perception of increased civilian marketability from the acquisition of skills in high-technical ratings such as electronics and data systems. Again, future study in this area would be required to confirm this supposition.

D. FIRST TERM ATTRITION

Another measure of performance is the attrition rate during a term of enlistment. Attrition before reaching the end of a contractual obligation is detrimental to the military not only from the aspect of loss of personnel to meet grade level requirements, but also is a loss of potential return on investment in personnel training.

DMDC attrition data were used to compile the percentage of survivors for the FY78 all navy accession cohort stratified by entry age. The survival data for the cohort composed of individuals enlisting for four years of obligated service are presented in Table VIII and the survival data for the cohort of those enlisting for six years of obligated service are presented in Table IX. Information was available for the two obligated service cohorts only through 48 months of service. So while the four year estimated time in service (ETS) cohort was at the end of the obligated service contract, those with six-year ETS contracts had two years remaining before they would reach the end of required obligated service.

The analysis of those with four-year ETS obligations indicated a pattern of decreasing attrition through age 24. However, after age 24 the attrition rate increased by approximately five percent. The oldest entry age cohort had the poorest rate of retention through the first enlistment contract.

TABLE VIII

FY78 ACCESSION COHORT SURVIVOR RATES (4 ETS)

Total four year ETS accessions: 62,247
% survivor

Length of Service (months)	Entry Age 17-19	20-21	22-24	25-35
0	100	100	100	100
6	88.68	87.41	89.63	85.90
12	85.61	84.41	88.02	81.55
18	82.69	81.31	84.72	77.91
24	79.95	79.06	82.00	75.33
30	77.48	76.92	77.46	73.08
36	74.83	74.95	75.77	71.03
48	72.84	73.45	74.00	69.28

TABLE IX

FY78 ACCESSION COHORT SURVIVOR RATES (6 ETS)

Total six year ETS accessions: 16,070
% survivor

Length of Service (months)	Entry Age 17-19	20-21	22-24	25-35
0	100	100	100	100
6	89.20	87.50	89.09	86.69
12	86.46	84.19	86.52	83.78
18	83.90	81.85	84.21	80.24
24	80.62	79.74	82.06	77.75
30	77.96	78.09	80.77	74.84
36	75.23	76.41	78.79	74.22
48	73.81	75.53	77.85	73.59

The analysis of those with an initial six-year ETS obligation indicated that after 48 months of service, approximately 78 percent of the 22-24 aged entrants were still on active duty. The pattern was the same as for four-year ETS contracts: decreasing attrition with increasing entry age up through the third age cohort, then increased attrition for the oldest age cohort. However, the lowest percentage of survivors in the six-year ETS cohort, (the 25-35 year olds at 73 percent), was competitive, with the best percentage of survivors of the four-year ETS cohort, (the 22-24 year olds). This may be due to the higher entry requirements inherent in entry to ratings which require a six-year enlistment obligation. The higher standards of entry may be a factor in reduced attrition during the first enlistment contract. The 22-24 year entrants who entered the Navy appear to be the most desirable considering their attrition rates for both four and six-year obligated service contracts.

While those individuals who entered into officer programs should be considered as a loss from the enlisted rolls, such movement into the officer ranks indicates these individuals were highly desirable performers. Movement into officer programs was, therefore, not counted as attrition. The percentage of the age cohort that accessed to officer entry programs during each six month length of service increment are presented in Tables X and XI for four ETS and six ETS contracts, respectively.

TABLE X

FY78 ACCESSION COHORT ENTRY TO OFFICER PROGRAMS
(four year ETS)

Total four year ETS accessions: 62,247

Length of Service (months)	Entry Age 17-19	20-21	22-24	25-35
0	0.00	0.00	0.00	0.00
6	0.01	0.02	0.00	0.00
12	0.03	0.02	0.00	0.00
18	0.05	0.06	0.04	0.00
24	0.12	0.05	0.14	0.10
30	0.12	0.06	0.04	0.10
36	0.08	0.02	0.08	0.00
38	0.04	0.02	0.02	0.00
Total Percentage transfers to officer programs	0.45	0.23	0.32	0.20

TABLE XI

FY78 ACCESSION COHORT ENTRY TO OFFICER PROGRAMS
(SIX YEAR ETS)

Total six year ETS accessions: 16,070

Length of Service (months)	Entry Age 17-19	20-21	22-24	25-35
0	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00
12	0.37	0.09	0.00	0.00
18	0.53	0.00	0.09	0.00
24	0.03	0.05	0.09	0.00
30	0.05	0.00	0.00	0.00
36	0.02	0.00	0.00	0.00
48	0.02	0.00	0.00	0.00
Total percentage transfers to officer programs	1.02	0.14	0.18	0.00

The highest numbers of accessions to officer entry programs for both four-year ETS and six-year ETS cohorts were in the 17-19 entry age cohort. This may be due to specific service policy or older individuals may enter officer programs predominately through officer entry programs that require a college degree prior to entry.

An analysis of the reasons for separation prior to completion of obligated service of the FY78 accession cohort was conducted to determine the factors that resulted in the different attrition rates of the entry age cohorts. The result of the analysis of reasons for separation for the FY78 four and six-year ETS cohorts is presented in Table XII. Service separations were grouped into six categories: medical, hardship, death, officer entry, failure to meet minimum performance and behavioral standards, and other separations. (See Appendix B for a listing of subgroupings which made up these categories.)

For both the four and six-year ETS cohorts the categories of medical disqualification and failure to meet minimum behavioral or performance criteria were the major factors that affected the variance between attrition percentages of the entry age cohorts. As entry age increased, the percentage of individuals discharged due to medical problems increased. The incidence of medical discharge more than doubled from the lowest to the highest cohort. Medical standards are controllable at entry to a certain extent, and

TABLE XII

REASONS FOR DISCHARGE BEFORE ETS

(% of accessants lost for the indicated reasons)
FY78 four year ETS

Discharge Category	Age at Entry 17-19	20-21	22-24	25-35
Medical	2.00	2.54	2.73	4.54
Hardship	0.18	0.30	0.40	0.49
Death	0.37	0.37	0.38	0.44
Officer Entry	0.41	0.19	0.32	0.20
Failure to meet minimum standards	19.93	17.72	16.35	19.17
Other	4.31	5.66	6.07	6.10
TOTAL	27.20	26.75	26.25	30.94

FY78 six year ETS

Discharge Category	Age at Entry 17-19	20-21	22-24	25-35
Medical	1.55	2.45	2.24	4.37
Hardship	0.12	0.29	0.18	0.21
Death	0.26	0.17	0.61	0.63
Officer Entry	0.99	0.13	0.18	0.00
Failure to meet minimum standards	20.66	17.59	15.28	15.39
Other	3.64	4.02	3.87	5.83
TOTAL	27.20	26.75	26.25	30.94

current standards in regards to age possibly could be relaxed without a serious degradation to the force [Ref. 1]. Further analysis is needed to determine what type of physical standard is not being met.

The largest variance between the cohorts occurred under the category of failure to meet minimum performance or behavioral standards. For the four-year ETS cohort the youngest and the oldest entrants had the highest rates of discharge for this reason. The 22-24 entry cohort had the lowest rate of discharge at 16.35 percent. approximately three percent lower than the 17-19 entry cohort rate. A different pattern of variance existed for the six-year ETS individuals. As entry age increased, the percentage of discharges decreased. The discharge rate dropped from approximately 20.5 percent for the youngest entrants to approximately 15.25 percent for the 22-35 age cohort. This may indicate that, on average, older entrants may be of high quality in comparison to other entry age cohorts in this regard. The oldest entrants who join the navy for four-year obligations, however, may on average be uncompetitive in the civilian labor market and could view the navy as employment of last resort. Of note, the age cohort that contained the highest percentage of individuals who failed to meet minimum standards was for both ETS cohorts, the 17-19 year olds, the cohort that is traditionally targeted for recruitment.

A complete analysis of entry age effects would need to focus on the civilian employment experience of each age cohort. In particular, we would like to ascertain how each cohort compares to its peers who do not enter the military. The prefered target recruiting population may very well be one that is not currently participating at very high rates in military employment.

The next chapter studies other background variables as well as perceptions and differences in intent based on entry age. The next chapter used data from a random sample of the entire DoD population.

III. FINDINGS OF RAND DOD SURVEY

A. METHODOLOGY

The data base was adjusted to include only those individuals who accessed to the service after 1973. This eliminated any possibility of a conscription environment influencing the responses of individuals.

The sample was partitioned by age at service entry and analyzed using multiple classification analysis (MCA) [Ref. 11]. MCA was used to control for the variables of sex, race, the enlistment contract the respondent was serving at the time of the survey, and the branch of service the respondent entered. In addition to adjusting for the variance of control variables and the interactions between the control variables and the survey questions, the MCA program computed the number of valid survey responses which made up the sample size for each individual question. The MCA program also computed the level of statistical significance based on the F-test and degrees of freedom for each sample size in the analysis. The F-test is a statistical method of deciding whether data do or do not come from the same normal population. The procedure was used to test the null hypotheses of no significant difference between age at entry cohorts in their response to questions in a number of categories. The categories are presented in Table XIII.

TABLE XIII

DoD SURVEY AREAS OF ANALYSIS

A. Individual characteristics
B. Reserve/Guard intentions
C. Perceptions concerning military compensation and benefits
D. Perceptions of civilian employment
E. Perception of military life
F. Perception of race relations
G. Perception of military retirement
H. Perception of promotion
I. Re-enlistment intent
J. Years of service intended

Three groupings were used for race: Black, Oriental and White. The Oriental classification includes those of Asian, Chinese, Japanese, Korean, Filipino and Pacific Island origin. Due to small samples, other racial groups were not included in the analysis. Enlistment contract was separated into the first enlistment contract or "careerist" contract, if serving on a second or third enlistment contract at the time of the survey. It must be emphasized that none of the members of our "careerist" group had more than five years of military employment.

A study of individual characteristics stratified by entry age was conducted to provide a historical description of the Rand survey data. Age was analyzed by sex, race, enlistment contract serving at the time of the survey, and

military branch which the respondent accessed. The results of the study are presented in Table XIV.

TABLE XIV

ENTRY AGE BY SEX, RACE, TERM OF ENLISTMENT, AND MILITARY BRANCH

Sample Mean = 19.01 years old at entry

Variable plus Categcry	N	Entry Age
Sex		
male	5877	18.82
female	1489	19.77
Race		
black	1465	19.09
oriental	156	20.58
white	5745	18.95
Enlistment serving		
first	5586	19.04
career	1780	18.91
Service		
Air Force	1711	19.22
Army	1623	19.16
Marines	1643	18.59
Navy	2389	19.05

On average, the survey data indicated that females accessed at an older age than males. Orientals joined the service at an older age than blacks and whites. Individuals who joined the Air Force and Army were slightly older than those who joined the Marines and Navy. A similar pattern was found in a telephone survey of civilian males, aged

23-29, conducted by the Naval Personnel Research Data Center (NPRDC) [Ref. 13]. The telephone survey found interest in possible enlistment in the Air Force and Army over the Navy or Marines amongst non-prior service males in the civilian sector to increase with the respondents' age. If such a behavioral trend is a significant factor in enlistment decisions, demographic shifts in the population age may have greater impact on the Marines and Navy than the Air Force and Army.

Current regulations allow entry into any one of the four services when the otherwise qualified person is between the ages of 17-35 [Ref. 12]. We grouped this range of authorized ages into four age-at-entry cohorts: 17-19, 20-22, 23-24, 25-35 years of age. These four cohorts were selected after initial exploratory analysis employing ten entry age cohorts indicated a general pattern of change with age at entry that is revealed by the grouping of ages into a smaller number of cohorts. The loss of detail in the age stratification is more than compensated by the ease of understanding gained by the use of four age cohorts. If Levinson's theory of male personality is correct, then the four age cohorts would differ in average response from the ages of 17 to 35.

The results of the survey should be viewed with the following caveat. According to Aizen and Fishbein [Ref. 14], an individual's intention is generally the immediate and most accurate determinant of behavior under several conditions.

There must be correspondence between the measure of intention and measure of behavior as to the target (i.e. the job), the action (i.e. recruitment), the time frame, and the context. The context is the military for the purpose of this analysis. Intentions change over time. The longer the time interval, the less accurate is the prediction of behavior from intention. Aggregate intentions are much more stable than individual intentions over time, because incidents that affect individuals are likely to balance out at the aggregate level. Predictions of behavior from intentions at the aggregate level are therefore remarkably accurate.

Variations in behavior for entry age cohorts should not be considered an absolute measurement. In the aggregate, however, the variations in response to questions exhibited by the cohorts indicates trends in behavior. Significant variation in response to questions of an economic or behavioral nature may indicate that age at service entry is a variable that should be considered in service policy determination.

B. INDIVIDUAL CHARACTERISTICS

The first application of multiple classification analysis (MCA) is years of education received at the time of service entry, as presented in Table XV. The results listed under control variables are unadjusted for variation caused by interactions between the control variables and education by

TABLE XV

YEARS OF EDUCATION

Sample Mean = 12.12 years

Control Variables	Sample N	(Years)	Significance of F
Sex			0.001
Male	5850	12.03	
Female	1485	12.48	
Race			0.001
Black	1453	12.08	
Oriental	156	11.58	
White	5726	12.11	
Enlistment Contract			0.001
First	5569	12.16	
Career	1766	11.99	
Service			0.001
Air Force	1705	12.28	
Army	1614	11.96	
Marines	1636	11.95	
Navy	2380	12.23	
Unadjusted Education by Entry age			0.001
17-19	5263	11.87	
20-21	1241	12.50	
22-24	620	13.07	
25-35	211	13.37	
Adjusted Education by Entry age			0.001
17-19	5263	11.88	
20-21	1241	12.49	
22-24	620	13.06	
25-35	211	13.28	

entry age. The variables utilized as control variables are the attributes upon which the stratified sampling occurred. The result listed under Adjusted Education by Entry Age, is the average educational level of each entry age cohort adjusted for variation associated with interactions with the control variables. For example, the variation in educational attainment associated with gender is isolated and controlled, and therefore is not determining the indicated variation between the entry age cohorts. The Unadjusted Education by Entry Age results are included in this first table to illustrate the difference in result when variation of the control variables are controlled.

All independent variables used as controls as well as the age cohorts were found to have significant differences at the .001 level. As entry age increases, the level of education increases.

The Profile of American Youth Survey indicated a similar trend in AFQT scores in the civilian youth population [Ref. 3]. These results indicate that the present target age group for enlisted supply, ages 19-21, may not be the optimal target age category to access in terms of mental quality. As discussed by Coleman and Toomepuu, [Ref. 4], recruitment of older aged individuals may improve the average mental quality of recruits.

The finding that females who access to the services have a higher average level of educational attainment is probably

the result of smaller sized recruit goals and subsequent higher entrance requirements for females than their male counterparts [Ref. 12]. Likewise, screening procedures and individual service requirements may explain some of the variance of educational attainment of Air Force and Navy recruits in comparison to Army and Marine Corps recruits.

Analysis of the parents' education of respondents, shown in Tables XVI and XVII, indicate that parental education is sensitive to all of our control variables as well as entry age. The Profile of American Youth Study, [Ref. 3], argued that mother's education has a stronger relationship to a child's level of attainment than does the father's education.

Parent's education declined as the cohort entry ages increased. This pattern is inversely related to the education attainment level of the age cohorts themselves, in which education attainment increased at service entry age. A possible explanation of this pattern could be that, on average, older aged individuals from lower socio-economic backgrounds, indicated by lower educational levels of the parents, view the military as a better vehicle than available civilian options for a desired career opportunity. However, future study in this area would be required to validate this conjecture.

The upward mobility of American society is indicated by the higher level of education for respondents as compared to their parent's education. Also, comparison of educational

TABLE XVI

MOTHER'S EDUCATION (YEARS)

Sample Mean = 11.88 Years

Control Variables	Sample N	(Years)	Significance of F
Sex			0.019
Male	4215	11.83	
Female	1415	12.00	
Race			0.001
Black	1344	11.49	
Oriental	120	11.37	
White	4166	12.02	
Enlistment Contract			0.001
First	4259	11.99	
Career	1371	11.55	
Service			0.001
Air Force	1212	11.88	
Army	1192	11.61	
Marines	1356	11.85	
Navy	1870	12.07	
Adjusted Education by Entry age			0.001
17-19	3964	11.96	
20-21	974	11.71	
22-24	486	11.74	
25-35	206	10.47	

TABLE XVII

FATHER'S EDUCATION (YEARS)

Sample Mean = 11.68

Control Variables	Sample N	(Years)	Significance of F
Sex			0.040
Male	4128	11.61	
Female	1377	11.89	
Race			0.001
Black	1261	10.80	
Oriental	119	11.89	
White	4.25	11.94	
Enlistment Contract			0.001
First	4174	11.82	
Career	1331	11.25	
Service			0.003
Air Force	1191	11.84	
Army	1166	11.31	
Marines	1317	11.58	
Navy	1831	11.88	
Adjusted Education by Entry age			0.011
17-19	3881	11.71	
20-21	952	11.71	
22-24	471	11.71	
25-35	201	10.95	

attainments of the three racial categories may illustrate the effects of equal opportunity programs for minorities over the last decade. The gap between parents' and their childrens' level of educational attainment closed for the three racial categories used in the analysis.

Table XVIII presents the results of the analysis of the number of members of the respondents' family who also had served in the military. Careerists had a greater percentage of immediate family members who had served in the military than did those respondents who were serving on an initial enlistment contract. This difference was statistically significant at the .001 level. The pattern of individuals exhibiting higher rates of career behavior when other family members had served in the military has recently been discussed by Hunt [Ref. 15].

As one would expect, analysis of marital status at service entry, presented in Table XIX, indicated a pattern of increasing percentages of older age cohorts being married. The 17-19 entry age cohort, on average, reported a marriage rate of six percent compared to thirty-four percent for those individuals in the 22-24 entry age cohort and forty-two percent for individual's in the 25-35 entry age cohort.

The rapid increase in the percentage of married individual's with increasing age, a threefold increase between the 17-19 and 20-21 age cohorts, for example, indicates that even a modest increase in the present target ages for

TABLE XVIII

NUMBER OF IMMEDIATE FAMILY MEMBERS WHO SERVED IN THE MILITARY

Sample Mean = 1.42 family members also served

Control Variables	Sample N	Number Served	Significance of F
Sex			0.019
Male	4659	1.40	
Female	1552	1.49	
Race			0.024
Black	1475	1.36	
Oriental	128	1.28	
White	4608	1.44	
Enlistment Contract			0.001
First	4684	1.36	
Career	1527	1.54	
Service			0.814
Air Force	1338	1.40	
Army	1318	1.44	
Marines	1506	1.44	
Navy	2049	1.41	
Adjusted members served by Entry age			0.877
17-19	4357	1.41	
20-21	1096	1.44	
22-24	552	1.42	
25-35	226	1.46	

TABLE XIX

MARITAL STATUS AT ENTRY

(% x 100)
Sample Mean = 11% married

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.001
Male	5752	12	
Female	1369	08	
Race			0.001
Black	1420	10	
Oriental	155	08	
White	5546	11	
Enlistment Contract			0.989
First	5420	11	
Career	1701	11	
Service			0.001
Air Force	1660	19	
Army	1554	13	
Marines	1609	06	
Navy	2298	07	
Adjusted Marital Status by Entry age			0.001
17-19	5221	06	
20-21	1181	20	
22-24	561	34	
25-35	158	42	

recruitment will result in large increases in requirements for dependent support. Any policy which would result in increased percentages of service personnel with families may have important policy implications in areas such as housing, base support, health care and moving allowances.

The individual missions of the services may also be a factor into which branch individuals access. The Air Force and Army accessions had much higher rates of marriage than did accessions to the Navy and Marine Corps. Family separations inherent to sea duty may be a factor in the enlistment decision for married individuals. The Navy and Marines may be at a disadvantage in this regard in competing with the Air Force and Army for older aged recruits.

In addition to an increase in the percentage of respondents with spouses as entry age increases, the number of dependents other than spouse also increases with age. As illustrated in Table XX, the average number of dependents excluding a spouse is 0.38 for the 17-19 entry age cohort, and exactly one dependent for the 25-35 entry age cohort.

The high average number of dependents for Orientals compared with Blacks and Whites may be due to cultural and religious factors. The differences in the average number of dependents between first enlistment and career individuals is most likely due to careerists having a longer length of time to produce a family, rather than increased fecundity.

TABLE XX

NUMBER OF DEPENDENTS EXCLUDING SPOUSE

Sample Mean = 0.45 dependents

Control Variables	Sample N	Number Served	Significance of F
Sex			0.001
Male	4469	0.52	
Female	1498	0.25	
Race			0.001
Black	1400	0.58	
Oriental	118	0.76	
White	4449	0.40	
Enlistment Contract			0.001
First	4485	0.32	
Career	1482	0.83	
Service			0.001
Air Force	1314	0.56	
Army	1254	0.60	
Marines	1417	0.35	
Navy	1982	0.35	
Adjusted Dependent by Entry age			0.001
17-19	4192	0.38	
20-21	1035	0.51	
22-24	532	0.66	
25-35	226	1.00	

This does indicate that higher rates of retention of individuals with an older entry age may also increase the variable costs associated with dependent support.

In summary, the analysis of descriptive variables based on entry age indicate that significant differences exist between recruits when they are stratified by age at service entry. These differences are present in marital status and the number of dependents service members have in their households. Additionally, significant differences were found in the level of education attained by both the respondents and their parents, race, and the service into which individuals enter based on service entry age. These differences indicate changes in recruitment policy altering the present age distribution of recruits could have a significant affect on quality, attainment of individual service recruiting goals and dependent costs for the force.

C. RESERVE/GUARD INTENTIONS

As reported by Coffey [Ref. 5], reserves and national guard units are important components of the total force concept. The reserves and national guard units are tasked with providing rapid re-enforcement to regular forces in the event of conventional war. Binkin states [Ref. 16], that the all-volunteer armed force affects reserve forces in two ways. They have become the primary source for augmenting the active forces with the end of conscription. At the same

time, however, the lessening of draft pressures raises the question as to whether enough volunteers can be attracted into the reserves.

The supply of prior-service individuals has also declined due to both the volunteer force and cutbacks in active duty strength since the end of the Vietnam war. Higher retention rates in the regular forces coupled with fewer numbers of individuals entering the regular forces has exacerbated the problem of meeting reserve recruitment goals due to a smaller available supply pool of prior-service individuals. Differences among entry age cohorts in propensity to join a reserve or national guard unit after leaving the regular forces would impact on the supply of prior-service individuals available for duty in the reserve component of the total force.

The analysis of intent to join either the reserves or national guard upon completion of duty in the regular forces is presented in Table XXI. Again, the response based on intent should be viewed within the perspective of previously mentioned factors concerning an individual's response to survey questions. So while the actual percentages of individuals can not be accurately determined by a questionnaire, the trends of the age cohorts in the analysis indicate that as entry age increases the propensity to join a reserve or national guard unit upon leaving the service increases. This implies that the supply of prior-service individuals

TABLE XXI

RESERVE/GUARD INTENTIONS

(% x 100)
Sample Mean = 34% positive intent

Control Variables	Sample N	(% of 100)	Significance of F
Sex			0.001
Male	4266	31	
Female	1100	46	
Race			0.001
Black	1030	47	
Oriental	97	52	
White	4239	30	
Enlistment Contract			0.001
First	4147	32	
Career	1219	42	
Service			0.001
Air Force	1293	25	
Army	1111	43	
Marines	1194	35	
Navy	1768	35	
Adjusted reserve intent by Entry age			0.047
17-19	3845	33	
20-21	895	36	
22-24	464	36	
25-35	162	41	

interested in duty in the reserves would increase if changes in recruitment policies increased the present age composition of recruits.

All control variables were found to be significant at the .001 level. Service females had a higher level of recruitment intent than service males. Minorities had a higher interest than Whites. Careerists, individuals classified as satisfied with military life in that they remained in the service beyond their initial enlistment contract, also appeared to have a greater interest than their first-term counterparts to remain in the service on a part-time basis if they left the regular service before retirement. The pattern of response to the service cohorts was also of interest. While in previous analysis of promotion perception, intended length of service and re-enlistment intent; Air Force response was generally higher than the other services. In the area of reserve intent, the Air Force was well below the other services in positive intent.

The relationship between interest in serving in an inactive reserve status and monetary incentives was inspected by analysis of response to a scenario in which a 200 dollar annual bonus would be awarded to individuals who remained in the individual ready reserve upon completion of duty in the regular forces. Results of the analysis are presented in Table XXII.

TABLE XXII

YEARS REMAINING IN INACTIVE RESERVE
FOR A $200 ANNUAL BONUS

(years)
Sample Mean = 2.60 years

Control Variables	Sample N	(Years)	Significance of F
Sex			0.001
Male	5818	2.49	
Female	1476	3.02	
Race			0.016
Black	1456	2.50	
Oriental	156	2.37	
White	5682	2.63	
Enlistment Contract			0.001
First	5535	2.42	
Career	1759	3.18	
Service			0.001
Air Force	1693	2.55	
Army	1604	2.57	
Marines	1630	2.73	
Navy	2367	2.56	
Adjusted reserve intent by Entry age			0.059
17-19	5234	2.55	
20-21	1233	2.61	
22-24	616	2.84	
25-35	211	2.82	

Entry age was significant at the .059 level. The two older age cohorts indicated an aggregate intention to remain in the individual ready reserve (IRR) approximately three months longer than the younger entry age cohorts. While this is probably not an accurate estimate of the actual time span an individual would serve in the IRR if placed in this scenario, it is significant that the trends in response indicated older aged entrants profess a higher interest in such a program.

The control variable of race indicated that Whites had a greater interest in the 200 dollar bonus scenario than the two minority cohorts. This is the opposite pattern indicated in the previous analysis of interest in joining a reserve or national guard unit. This may indicate that minorities, on average, are more responsive than Whites to the greater monetary compensation of part-time duty in the active reserves in lieu of a much smaller monetary compensation, albeit without weekend drills, in the inactive reserves.

In summary, Entry age appears to be a factor in intent to enlist in the reserves or national guard upon completion of duty in the regular forces. Older age recruits appear to have both a greater intent to join such units upon completion of duty and also exhibit a greater interest in remaining in the IRR for a small annual bonus.

D. MILITARY COMPENSATION AND BENEFITS

An individuals' level of monthly military compensation is not computed solely on the basis of paygrade and length of service. It is also based on an individual's marital status, location, and type of duty. A serviceman's career path and personal circumstance tend to make the level of monthly compensation unique for each individual. Therefore, the sample of military compensation of individuals who entered the service from 1973 through 1978 may be more robust than one unfamiliar with the complexity of the military compensation system would expect.

The analysis of total perceived monthly military compensation is presented in Table XXIII. The analysis employed the respondent's perceived level of compensation in 1979 rather than the actual level of compensation as calculated by DoD.

If service personnel are viewed as individuals who make rational economic decisions, based on pecuniary information at their disposal, then the perceived level of compensation may be a more accurate determinate of behavior than actual compensation.

The assumption was made that due to the higher expected earnings of the 22 to 35 age cohorts over the 17-21 year olds in the civilian sector [Ref. 17], older aged recruits to the military would either have or perceive a higher level of military compensation over the younger aged entrants if

TABLE XXIII

TOTAL MONTHLY MILITARY COMPENSATION

(annual pay in dollars)
Sample Mean - 768

Control Variables	Sample N	Deviation in dollars from grand mean	Significance of F
Sex			0.001
Male	5875	8	
Female	1488	-33	
Race			0.001
Black	1467	-43	
Oriental	158	16	
White	5738	11	
Enlistment Contract			0.001
First	5585	-33	
Career	1778	103	
Service			0.001
Air Force	1708	55	
Army	1625	-2	
Marines	1643	-14	
Navy	2387	-29	
Adjusted total compensation by Entry age			0.001
17-19	5283	-8	
20-21	1246	15	
22-24	623	23	
25-35	211	51	

the older entrants were economically competitive. The older aged cohorts indicated a significantly higher level of monthly compensation than the younger entrants. This was expected since DoD pays increased compensation in the form of basic allowance for quarters (BAQ) to married service members. Earlier analysis indicated that the percentage of married recruits increased with entry age. Also, male personnel and airmen indicated higher rates of marriage than the rest of their respective cohorts. So different marital rates and the subsequent different level of BAQ may also explain some of the difference in reported monthly compensation.

In an attempt to isolate the factor of marital status on the total level of monthly compensation, the analysis was repeated with marital status as one of the control variables. The SPSS program was limited to five independent variables [Ref. 11]. Therefore, service branch was deleted in the analysis to accommodate the variable of marital status. The results of the analysis, presented in Table XXIV, indicated that marital status did indeed account for some of the variance in reported compensation levels between age cohorts. The level of significance dropped from the .001 level to the .150 level when the variable of marital status was included in the MCA adjustment. As expected, the largest correction to reported compensation levels occurred in older age cohorts. Differences from the sample mean dropped from $23 to $3 for the 22-24 age cohort and from $51 to $19 for the 25-35 age cohort.

TABLE XXIV

TOTAL MONTHLY MILITARY COMPENSATION
ADJUSTED FOR MARITAL STATUS

(annual pay in dollars)
Sample Mean = 767

Control Variables	Sample N	Deviation in dollars from sample mean	Significance of F
Sex			0.001
Male	5752	8	
Female	1369	-35	
Race			0.001
Black	1420	-43	
Oriental	155	19	
White	5546	11	
Enlistment Contract			0.001
First	5420	-33	
Career	1701	104	
Marital Status			0.001
Single	5420	-11	
Married	1701	88	
Adjusted total compensation by Entry age			0.150
17-19	5221	-4	
20-21	1181	13	
22-24	561	3	
25-35	158	19	

It does appear that in the aggregate, as age increases, the level of compensation increases. The analysis indicated that this pattern is produced mainly from the factor of marital status rather than from the disbursement of special pays and bonuses for tasks involving hazardous duty or critical skills. It does appear that increased marital rates among older individuals coupled with service policy that allots extra payments to married individuals has acted, perhaps inadvertendly, as a method of maintaining a better level of pay comparability with the civilian sector based on expected aggregate earnings stratified by age.

This supposition is supported by Table XXV, a breakdown of perceived monthly compensation into the subcomponents of Basic Pay, BAS, BAQ and special pay.

The analysis indicated, that on average, the oldest age cohort reported a monthly BAQ level approximately forty dollars higher than the youngest cohort. Of note, the oldest entry age cohort reported a monthly level of special pay that was approximately fifty dollars below that of the youngest cohort, which indicates the older age entrant may not be employed at the same level of tasks involving hazardous duty or critical skills as the younger age entrants.

The four control variables all displayed patterns of variance in reported compensation levels. Caution must be exercised in interpreting these results. Differences in compensation levels between sex, race, enlistment contract

TABLE XXV

TOTAL MONTHLY MILITARY COMPENSATION BY SUBCOMPONENTS

Variable plus Category	Basic pay	Basic allowance for subsistence	Basic allowance for quarters	Special pay
Grand Mean	577	47	88	290
Sex				
Male	10	-3	2	-1
Female	-40	12	-8	5
Race				
Black	-20	-10	-1	66
Oriental	-4	1	16	66
White	5	2	0	-19
Enlistment Serving				
First term	-20	-3	-10	-26
Careerist	62	10	33	80
Service				
Air Force	20	21	11	47
Army	14	-9	-3	96
Marines	-8	-4	-0	19
Navy	-18	-6	-6	-75
Adjusted for Age at Entry				
17-19	-1	-2	-5	0
20-21	2	4	8	6
22-24	8	3	18	6
25-35	1	6	36	-53

and service branch were not adjusted for marital rates or for interactions between the control variables. Control variable variance may exhibit the same pattern of attenuation as displayed by the entry age cohorts if the control variables were adjusted for their own interactions and different marital rates. Further analysis would be required to confirm this conjecture.

Another form of compensation is military contributions to civilian education in the form of the Volunteer Educational Allotment Program (VEAP). VEAP is a program in which a service member may enroll at any time while on active duty [Ref. 18]. Service personnel may contribute by allotment $25 to $100 per month to a maximum of $2,700. The Veteran's Administration contributes two for one for a maximum educational fund of $81,000 which is paid back at a maximum of $225 a month for 36 months after the individual leaves the service if the individual attends the same education programs as approved by the G.I. bill. This program could be considered as an investment that is an indicator of future intent to gain education upon leaving the service. The result of this analysis is presented in Table XXVI.

The oldest entry age cohort reported contributions to civilian education at almost twice the level of the youngest entry age cohort, indicating that of individuals who intended to leave the service upon completion of their enlistment contract, those of older entry age may have greater intent

TABLE XXVI

MILITARY CONTRIBUTION TO CIVILIAN EDUCATION

Sample Mean = 130 (dollars)

Control Variables	Sample N	(dollars)	Significance of F
Sex			0.974
Male	5875	128	
Female	698	131	
Race			0.184
Black	634	157	
Oriental	69	151	
White	2534	121	
Enlistment Contract			0.459
First	2471	126	
Career	766	138	
Service			0.001
Air Force	744	186	
Army	739	124	
Marines	733	82	
Navy	1021	124	
Adjusted education contribution by Entry age			0.206
17-19	2308	125	
20-21	579	116	
22-24	245	150	
25-35	105	220	

to further their education upon leaving the service. Of the control variables, only service branch indicated a significant confidence level. Individual service policy as well as individual preference may account for this pattern of variance.

Service occupation and duty station location determine the off-duty time and options of employment in the private sector while also serving on active duty. While not a direct form of compensation, sailors and marines on deployment clearly have no options of off-duty employment and such a situation could be viewed as an opportunity loss when a rotation is made from shore to sea duty. Personnel in the Army and Air Force may also face this opportunity loss when transferring from installations in urban areas to locations in foreign or remote locations. Therefore, employment in a civilian job while also on active duty is predicated on the ability to work while off-duty as well as the desire or need for additional monetary compensation. An analysis of reported annual income earned working in a civilian job while also on active duty is presented in Table XXVII.

The .955 level of confidence calculated for the entry age cohorts indicates that a high degree of confidence can be placed in accepting the null hypothesis that there is no difference in this case between the entry age cohorts. However, the difference in response of the control variables could be considered significant. In the aggregate, it appears

TABLE XXVII

ANNUAL INCOME EARNED IN A CIVILIAN JOB
WHILE ON ACTIVE DUTY

(annual pay in dollars)
Sample Mean = 2000

Control Variables	Sample N	Deviation in dollars from Sample mean	Significance of F
Sex			0.028
Male	1353	130	
Female	307	-660	
Race			0.005
Black	336	300	
Oriental	28	2260	
White	1306	-130	
Enlistment Contract			0.075
First	1228	-170	
Career	432	470	
Service			0.025
Air Force	425	-100	
Army	306	250	
Marines	411	450	
Navy	518	-430	
Adjusted civilian employment earnings by Entry age			0.955
17-19	1187	30	
20-21	1194	-60	
22-24	597	-100	
25-35	208	-180	

that in 1979, if working in the civilian environment, active duty males may have earned more in civilian jobs than active duty females. Also, individuals with career tendencies may have earned more on average than those on the first enlistment. Soldiers and marines on average, reported higher civilian earnings than airmen and sailors. The Oriental cohort reported civilian earnings that averaged over twice the level of the sample mean. The Oriental cohort sample size numbered only 28 individuals. However, the significance level of .005 indicates that Orientals, on average, may have a much larger desire or ability to work in the civilian environment as compared with the other racial cohorts examined. Further study of the control variables would be required to verify and explain the patterns of behavior exhibited in this analysis.

E. PERCEPTIONS OF CIVILIAN EMPLOYMENT

As reported by Cooper [Ref. 19], civilian unemployment is a factor in the determination of enlisted supply. The existence of differences in the perception of the civilian labor market caused by entry age would further complicate the computation of future enlisted supply based on models involving projected civilian unemployment rates. Perhaps of greater importance, identification of marked differences in behavior response to civilian unemployment conditions of age cohorts would be of value in the determination of

manpower policy under different force age structures. The behavior of military personnel in response to the civilian labor market was examined from three different, although probably inter-related aspects. Sensitivity to the civilian labor market was measured by the analysis of survey responses on the expectations of finding a good civilian job, expected civilian earnings if the individual was able to leave the service at the time of the survey and civilian job offers in the last twelve months prior to the survey.

The analysis of the perception of finding a good civilian job if the respondent left the service, presented in Table XXVIII, was recorded in same manner mentioned previously to convert a one to ten scale to a ratio of positive to total response.

The overall sample mean of 92 percent indicated a very high percentage of respondents felt they had a high probability of finding good civilian employment. The significance level of .529 for the entry age cohorts indicated that there is probably no difference in the perception of civilian job opportunity based on entry age stratification.

Significant variance was found in the control variables. On average, first term individuals indicated slightly higher rates of positive employment attitudes over those individuals serving beyond an initial service obligation. This may indicate a tendency to remain in the service due to the perception of limited civilian employment options. The

TABLE XXVIII

PERCEPTION OF FINDING A GOOD CIVILIAN JOB

(% x 100)
Sample Mean = 92 positive attitude

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.001
Male	5661	91	
Female	1430	88	
Race			0.001
Black	1381	88	
Oriental	142	93	
White	5568	93	
Enlistment Contract			0.016
First	5379	93	
Career	1712	90	
Service			0.001
Air Force	1643	90	
Army	1545	90	
Marines	1584	94	
Navy	2319	93	
Adjusted civilian employment perception by Entry age			0.529
17-19	5092	92	
20-21	1194	93	
22-24	597	92	
25-35	208	94	

difference in response between the gender and race cohorts may be a reflection of a perception of discrimination in regards to civilian employment. Females and Blacks indicated a significantly lower perception of civilian employment opportunity than the male, Oriental and White cohorts.

While the previous analysis was based on the perception of what constitutes a "good" job, the analysis of expected annual earnings if working in the civilian environment quantified the perceived quality of expected civilian employment by fixing an actual dollar value to what constituted "good" employment in 1979. The results of the analysis are presented in Table XXIX.

Entry age was significant at the .015 level with expected annual earnings decreasing for the entry age cohorts of 20-24, and then rising to 14,200 dollars for the oldest entry age cohort. The average earnings expectation for the oldest entry age cohort was approximately the same level of expected civilian earnings as the youngest entry age cohort.

This dip in expected earnings indicated by the middle age cohorts may be due to several factors. The 17-19 entry age cohort may have grossly over estimated expected civilian earnings. This may be a plausible assumption since these individuals have had little or no actual experience in the civilian job market. Annual wages for 1978, compiled from data in the Statistical Abstract of the United States [Ref. 17], indicated the following median income for workers in

TABLE XXIX

ANNUAL EARNINGS IF WORKING IN THE CIVILIAN ENVIRONMENT

(earnings in dollars)
Sample Mean = 14,000

Control Variables	Sample N	(dollars)	Significance of F
Sex			0.001
Male	4353	14,500	
Female	870	11,700	
Race			0.069
Black	960	13,700	
Oriental	90	15,400	
White	4217	14,000	
Enlistment Contract			0.001
First	3999	13,800	
Career	1224	14,800	
Service			0.005
Air Force	1234	13,800	
Army	1041	13,500	
Marines	1173	14,500	
Navy	1175	14,200	
Adjusted expected civilian wage by Entry age			0.015
17-19	3700	14,200	
20-21	898	13,800	
22-24	460	13,100	
25-35	165	14,200	

1978: males 16-24 averaged 9620 dollars, males 25 and older averaged 15,288 dollars and the median income for all workers was 11,804 dollars. All entry age cohorts reported expected earnings well above the national average.

The three younger age cohorts grossly over-estimated expected civilian earnings in relation to the civilian sector, although this over-estimation decreased with older entry age. This may indicate that respondents had an inflated civilian estimate due to limited experience in the civilian labor market, or perhaps was due to the survey response not resulting in tangible monetary reward or punishment. If this was the actual level of earning these cohorts would expect to earn in the civilian sector, the military must be offering something besides economic incentive to retain younger aged individuals.

The oldest entry age cohort appeared to have a more realistic approximation of expected earnings in the civilian sector for individuals in their age cohort. Older age entrants probably spent several years in the civilian labor force before enlisting in the service and therefore may have a more realistic perception of expected civilian earnings.

The supposition was made that the two previous studies of civilian employment opportunities may have been affected by actual recruitment attempts by civilian organizations in the year previous to the survey. The results of this analysis are presented in Table XXX.

TABLE XXX

JOB OFFERS IN THE LAST 12 MONTHS

Sample Mean = 47% received job offers

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.001
Male	5793	50	
Female	1473	34	
Race			0.001
Black	1430	37	
Oriental	155	36	
White	5680	50	
Enlistment Contract			0.001
First	5509	48	
Career	1756	43	
Service			0.001
Air Force	1684	43	
Army	1595	45	
Marines	1628	51	
Navy	2358	48	
Adjusted job offers by Entry age			0.148
17-19	5205	48	
20-21	1233	46	
22-24	617	43	
25-35	210	48	

While entry age was significant at only the .148 level, the pattern of variance was on the same order as that exhibited in the previous analysis of expected civilian earnings. Both the youngest and oldest entry age cohorts reported the same percentage of job offers. Positive response declined through the two middle cohorts. The lowest and highest entry age cohorts may perceive themselves as having the ability to obtain higher paying employment or they may have had a more accurate estimate of the civilian labor market based on greater interaction with civilian labor recruiters. If the lowest and highest entry age cohorts did have an accurate knowledge of the civilian labor market, the expected earnings that was well over the national average for all entry age cohorts may indicate that these individuals were being recruited for civilian occupations that paid well above the national average.

The disparity of indicated job offers previous to the survey between cohorts of gender and race variables may be indicative of differences in levels of job opportunities for different segments of civilian society. Males reported significantly greater civilian recruitment attempts than females, and Whites reported significantly greater levels of civilian recruitment attempts than Blacks or Orientals.

F. PERCEPTION OF MILITARY LIFE

One measure of military effectiveness that is often mentioned as an indicator of the potential ability in combat

is "unit morale." Morale is a concept that is difficult to measure. For the purpose of this study, we defined morale as a group personality defined by the aggregate perception of individuals in the unit.

Two areas of individual perception were examined to test the hypothesis that entry age affects individual perceptions of the military organization. They are: (i) the perception of the unit being able to successfully complete an assigned wartime mission, and (ii) the individual's overall feeling of satisfaction with military life. These are only two of many personal perceptions, that in the aggregate possibly define the personality of a military unit.

As in the earlier analyses, a one-to-seven scale of response was recoded to provide output as a ratio of positive to total response. The result of the analysis of perception of the individual unit's ability to complete an assigned wartime mission is reproduced in Table XXXI.

Entry age was found significant at the .064 level and the analysis indicated that as entry age increased, the perception of the ability of an individual's unit to complete a wartime mission increased. If the assumption is made that entry age is not a factor in assignment to units, then individuals have been assigned randomly among effective as well as ineffective units, eliminating the possibility that the older age cohorts are forming their perceptions

TABLE XXXI

RESPONDENTS' UNIT BEING ABLE TO COMPLETE ASSIGNED WARTIME MISSION

(% x 100)
Sample Mean = 73 positive perception

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.013
Male	4108	74	
Female	1276	71	
Race			0.044
Black	1215	75	
Oriental	105	78	
White	4064	72	
Enlistment Contract			0.046
First	4027	73	
Career	1357	74	
Service			0.000
Air Force	1184	80	
Army	1174	63	
Marines	1297	71	
Navy	1729	76	
Adjusted unit capability perception by Entry age			0.064
17-19	3777	72	
20-21	946	74	
22-24	465	75	
25-35	196	79	

from units that are actually more effective than units to which younger entry age cohorts are assigned.

Based on this one measure of individual perception, it may be inferred that increasing the proportion of older aged entrants of a unit could enhance unit morale based on the aggregate perception of the unit's level of effectiveness.

Of particular interest was the significant differences in the responses of the service cohorts. The Army cohort was well below the other three service cohorts in the perception of ability to complete assigned missions.

The analysis of the second measure used in the study, what is your overall satisfaction with military life, is presented in Table XXXII.

Entry age was significant at the .001 level and indicated a pattern of increasing satisfaction with military life with increasing entry age. This indicates, as in the previous analysis, individual perceptions of the service may become more positive with older entry age. Unit effectiveness based on the criteria of morale may increase if the proportion of older aged entrants increases. To the extent satisfaction with military life can be an important determinant of re-enlistment, we may expect to observe higher re-enlistment rates for older age groups.

The control variables were all highly significant and indicated that women and minorities, on average, indicated higher levels of satisfaction within the military than males

TABLE XXXII

SATISFACTION WITH MILITARY LIFE

(% x 100)
Sample Mean = 49 positive responses

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.000
Male	4668	45	
Female	1558	60	
Race			0.000
Black	1490	56	
Oriental	128	54	
White	4608	47	
Enlistment Contract			0.000
First	4695	43	
Career	1531	67	
Service			0.000
Air Force	1339	54	
Army	1319	52	
Marines	1503	51	
Navy	2065	42	
Adjusted satisfaction with military life by Entry age			0.001
17-19	4371	48	
20-21	1089	49	
22-24	538	51	
25-35	228	61	

and Whites. This may indicate a perception among minority cohorts within the service that DoD policies may be more equatiable than those policies found in the civilian sector. Also of note was the relatively low level of satisfaction of the Navy cohort in relation to the other services. This may indicate dissatisfaction with the required length of time away from homeport that is a characteristic of Navy missions.

G. PERCEPTIONS OF RACE RELATIONS

Harmonious interaction between different racial groups is required to maintain an effective military organization. Service policies designed to insure equal treatment of all service members must not only insure racial equality but must also be perceived as being effective in preventing racial discrimination. The study of this area of individual perception examined response in two areas: perception of the overall treatment of Blacks in the service, and perceptions of the Black cohorts' chances for promotion in relation to the White cohort. Again, as in earlier analyses, response was recoded to provide output in the form of a ratio of positive to total response.

Analysis of the responses to the question, "in my service, Blacks are treated exactly the same or a lot better than Whites", is presented in Table XXXIII.

Entry age was significant at only the .396 level, indicating that entry age was not a significant factor in the

TABLE XXXIII

PERCEPTION OF TREATMENT OF BLACKS

(% x 100)
Sample Mean = 83 perception that Blacks are treated equally or better than Whites in the service

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.582
Male	4589	82	
Female	1509	86	
Race			0.000
Black	1427	43	
Oriental	124	83	
White	4547	96	
Enlistment Contract			0.312
First	4598	84	
Career	1500	80	
Service			0.000
Air Force	1308	90	
Army	1295	87	
Marines	1471	83	
Navy	2024	82	
Adjusted treatment perception by Entry age			0.396
17-19	4328	83	
20-21	1067	83	
22-24	528	83	
25-35	220	86	

perception of race relations in the services. However, significant difference was indicated in the control variable of race. While 96 percent of the Whites and 83 percent of the Oriental cohorts indicated the perception of equal or better treatment of Blacks in relation to Whites in the service, only 43 percent of the Blacks felt they were treated equally or better in comparison to Whites. This indicates that equal opportunity programs are not acting on modifying the perceptions of the Black cohort even though the other two racial cohorts overwhelmingly indicated a perception of equal or even better treatment of Blacks in comparison to Whites. While this difference in racial perception clearly deserves further analysis, it was beyond the scope of this study.

The second area of perception of racial policy examined, the feeling of promotion chances being affected by race, presented in Table XXXIV, reproduced the same pattern of response as the previous question. Again, entry age was not a significant factor in individual perception.

However, the control variable of race indicated a perception, that in the aggregate, Blacks felt they did not have equal promotion opportunities in comparison to Whites.

The control variable of Service was significant at the .001 level for both analyses. However, since the control variables are not adjusted for interactions with the other variables used in the MCA; different racial compositions of

TABLE XXXIV

PERCEPTION OF PROMOTION CHANCES
AFFECTED BY RACE

(% x 100)
Sample Mean = 70 perception that minorities have equal or better chances of promotion compared to Whites

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.000
Male	4619	68	
Female	1537	77	
Race			0.000
Black	1468	47	
Oriental	127	74	
White	4561	77	
Enlistment Contract			0.329
First	4642	71	
Career	1514	67	
Service			0.000
Air Force	1322	82	
Army	1308	60	
Marines	1480	68	
Navy	2046	70	
Adjusted promotion perception by Entry age			0.974
17-19	4322	70	
20-21	1072	69	
22-24	536	71	
25-35	226	70	

the four services may explain a large portion of the variance between the response of the service cohorts.

H. MILITARY RETIREMENT

The hypothesis that entry age would affect behavior response to changes in the present military retirement system was studied by the analysis of positive interest in the following proposed retirement scenario: people who remained in the military for ten or more years would receive the following two benefits of a special lump sum bonus at the time they leave the service which would be taxed and retirement pay as presented in the schedule in question 84 of Appendix C. The results of this analysis is presented in Table XXXV.

Again, one should be cautioned that in view of the inflated levels of reported expected civilian income previously indicated, response to this scenario should not be considered the probable level of actual behavior if this retirement system was implemented. However, the variance from the sample mean of the entry age cohorts indicates that entry age may effect response to proposed retirement programs. Entry age was significant at the .047 level and the oldest aged recruits, on average, were more interested in the proposed scenario than the youngest cohort. This may indicate that older aged recruits would be more responsive to vested retirement than younger recruits.

TABLE XXXV

INTEREST IN A VESTED RETIREMENT SYSTEM

(% x 100)
Sample Mean = 58 positive intent

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.427
Male	5222	58	
Female	1331	59	
Race			0.011
Black	1267	62	
Oriental	136	58	
White	5150	57	
Enlistment Contract			0.000
First	4918	60	
Career	1635	53	
Service			0.000
Air Force	1517	53	
Army	1428	62	
Marines	1443	58	
Navy	1265	59	
Adjusted vested retirement interest by Entry age			0.047
17-19	3845	33	
20-21	895	36	
22-24	464	36	
25-35	162	41	

Significant differences also existed in response to the scenario in the enlistment contract variable. Those with career intentions were significantly less responsive to the proposed scenario than those on their first enlistment contract. This may indicate a need to implement any changes in current retirement policy with a "grandfather" clause to minimize possible adverse impact of a revised retirement program on the career force.

I. PERCEPTION OF PROMOTION

Two separate analyses were used to describe the perception of promotion based on response to the Rand survey. The question, "What is your chance of promotion to the next highest paygrade?", was used to evaluate the perception of promotion over a shorter time period than total length of intended service. The second question used in this portion of the analysis, "What are your chances of promotion in relation to your peers?", was used to evaluate individual perception of success that has evolved from an individual's routine self analysis based on the comparison of perceived success in relation to co-workers.

The question of what do you think your chances of being promoted to the next highest paygrade, allowed responses on a one-to-ten scale ranging from no chance (0 in 10), to certain (10 in 10). Responses that indicated the individual didn't know his chances for promotion, planned to retire,

leave the service or did not expect any more promotions were omitted from the analysis. Perceived promotion probabilities of 3 in 10, (some possibility) through 10 in 10 (certain), were recoded as 1, indicating positive perceptions of promotion. Those with responses of 0 in 10 (no chance) through 2 in 10 (slight possibility) were recoded as zero, indicating no chance for promotion. This recoding was done so results of the analysis would be reported as positive perception of promotion as a ratio of total response. The results of this analysis are presented in Table XXXVI.

The overall sample indicated that 84 percent felt they had a positive chance of promotion to the next paygrade. Variance in response of the age cohorts was significant at the .171 level. While not as significant as the variance from the sample mean reported in the control variables, the entry age cohorts exhibited a pattern of the two middle entry age cohorts having a slightly higher perception of positive promotion chances over the youngest and oldest entry age cohort, which had an equal and slightly lower percentage of positive perception. The variance in response between the age cohorts was too small to inable any significant interpretation.

The control variables did exhibit significant variance from the sample mean. The variable of service indicated that those in the Air Force and Navy averaged a higher rate of positive perception of promotion than the Army and Marine

TABLE XXXVI

PERCEPTION OF CHANCES OF PROMOTION

(% x 100)
Sample Mean = 84 positive intent

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.005
Male	3631	83	
Female	1115	87	
Race			0.042
Black	1074	82	
Oriental	109	79	
White	3563	85	
Enlistment Contract			0.035
First	3303	84	
Career	1443	85	
Service			
Air Force	1020	89	
Army	983	80	
Marines	1157	80	
Navy	1586	86	
Adjusted promotion perception by Entry age			0.171
17-19	3390	83	
20-21	794	86	
22-24	410	86	
25-55	152	83	

Corps cohorts. These patterns indicated that service differences existed an individual perception of promotion chances. Further analysis would be necessary to determine if these differences were caused by individual service policy, socialization within the individual services, or perhaps due to personality types that are initially attracted to each service during the recruitment decision. A combination of these factors may also act on perception.

The variance in response between the racial cohorts may indicate that Whites have slightly higher positive perceptions of promotion chances than Blacks and Blacks have slightly higher perceptions of promotion chances than Orientals. This is also the same pattern of variance exhibited by the racial cohorts in response to the previous question of the final paygrade an individual expected to achieve. The relatively short time interval to the next promotion opportunity should provide a more accurate representation vis-a-vis the time interval encompassing the entire length of an individual's career. Since intended length of service is a factor in the final paygrade achieved in the military's hierarchical structure, this question also eliminates the need to consider intended length of service as a factor in promotion perception.

The analysis of promotion chances relative to peers with the same length of service is presented in Table XXXVII. The analysis indicated that as entry age increased individuals

TABLE XXXVII

CHANCES OF PROMOTION RELATIVE TO PEERS

(% x 100)
Sample Mean = 81 positive perception

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.001
Male	3733	79	
Female	1128	87	
Race			0.081
Black	1104	78	
Oriental	114	79	
White	3643	82	
Enlistment Contract			0.212
First	3384	81	
Career	1477	81	
Service			0.001
Air Force	1038	89	
Army	1028	79	
Marines	1185	76	
Navy	1610	81	
Adjusted promotion perception by Entry age			0.102
17-19	3471	80	
20-21	817	81	
22-24	424	83	
25-35	149	87	

had a higher perception of chances of promotion in relation to co-workers with the same length of service. Entry age was significant at the .102 level. So while the results were not statistically conclusive, it appears that older age entrants may see themselves as more competitive for promotion than their younger entry age co-workers.

Of the control variables, gender and service branch were significant at the .001 level. On average, females had a higher self perception of their abilities in terms of promotion chances than males. The Air Force service members, in the aggregate, had a higher perception of promotion chances in comparison to co-workers than the other three services.

In summary, questions regarding promotion used three different indicators to evaluate promotion perceptions. While the results were not always statistically conclusive, the same pattern of increased perceptions of promotion chances as entry age increased was found in two of the analyses. If this pattern does exist, the self-perceptions of older aged recruits in feeling they are more promotable in relation to younger aged recruits could indicate a higher level of morale among older aged recruits compared to their younger co-workers.

J. RE-ENLISTMENT INTENT

In the analysis of Rand survey questions concerning re-enlistment intent it was assumed that economic pressures,

in the form of the military to civilian pay-ratio and civilian unemployment, are the major factors in an individuals' decision to remain in the service past an initial term of enlistment [Ref. 17]. The responses to the survey questions in this area were made without any economic sacrifice or reward on the part of the respondents and the time lag between the intent expressed in the survey and the chance for acting on intent could be considerable. Also, the survey questions were coded for a response based on a scale of one to ten which ranged from responses of "no chance for re-enlistment" to "very positive". Responses on the one to ten scale were grouped into either positive or zero intentions for re-enlistment. This recoding formatted the program output of positive re-enlistment intentions as a percentage of total response. For these reasons it should not be implied that analysis of the Rand data would result in the ability to compute accurate pay elasticites. However, the analysis did result in significant variation among the entry age cohorts. This was expected since aggregate civilian earnings are affected by age [Ref. 17], response to military pay should behave in the same manner in a volunteer military environment which is in competition with the civilian sector for available labor.

The response of first term individuals to three separate re-enlistment scenarios is presented in Table XXXVIII. The percentages of first term individuals indicating positive

TABLE XXXVIII

RE-ENLISTMENT BONUS INTENTIONS, FIRST TERM

	No Bonus		4000 Bonus		8000 Bonus	
	N	(% x 100)	N	(% x 100)	N	(% x 100)
Sex						
MALE	3968	41	3887	48	3887	61
FEMALE	1072	55	1068	62	1068	55
Race						
BLACK	865	55	864	61	864	71
ORIENTAL	93	55	92	56	93	72
WHITE	4022	41	3999	49	3998	61
Service						
AIR FORCE	1268	43	1261	62	1260	72
ARMY	904	45	899	49	901	63
MARINES	1037	48	1028	48	1030	60
NAVY	1771	49	1767	45	1704	58
Adjusted Re-enlistment intention by age						
17-19	3565	43	3543	51	3542	63
20-21	840	45	838	49	838	61
22-24	430	48	429	55	430	65
25-35	145	49	145	58	145	69

intentions for re-enlistment increased with larger bonuses for the variable of entry age. For each scenario, as entry age increased, positive intentions increased. Levels of significance for entry age were .217, .044 and .085 for the no bonus, $4000 and $8000 scenario respectively. Therefore, the pattern of increasing re-enlistment intent with older entry is not conclusive for the no bonus scenario. However, as bonuses were entered into the scenario entry age became significant. The oldest recruits indicated higher rates of positive intent than the younger aged recruits. The minor variance between the entry age cohorts under the no bonus scenario may indicate that a percentage of the force will remain without the attraction of a re-enlistment bonus. The high percentages of females and minorities in comparison with males and Whites who indicated they would remain in the service in a zero bonus environment may indicate a perception on the part of these military personnel that the military offers a better career opportunity for females and minorities than found in the civilian work force.

The response of career force individuals, presented in Table XXXIX, indicated higher levels of positive intent for all entry ages in all scenarios over first-term response. The F-test level of significance for entry age was .187, .085 and .140 for the no bonus, $4000 and $8000 scenarios respectively. The same general pattern of behavior for manpower systems is also reported by Bartholomew and Forbes

TABLE XXXIX

RE-ENLISTMENT BONUS INTENTIONS, CAREER

	No Bonus		4000 Bonus		8000 Bonus	
	N	(% x 100)	N	(% x 100)	N	(% x 100)
Sex						
MALE	1188	62	1188	74	1185	82
FEMALE	265	62	264	75	264	80
Race						
BLACK	379	65	376	76	375	85
ORIENTAL	38	71	38	84	38	95
WHITE	1036	61	1038	73	1036	80
Service						
AIR FORCE	253	70	253	86	253	90
ARMY	488	64	482	74	482	82
MARINES	368	57	371	72	369	79
NAVY	344	59	346	67	345	80
Adjusted Re-enlistment intention by age						
17-19	1043	61	1042	73	1040	82
20-21	253	64	253	72	252	80
22-24	118	66	118	80	118	81
25-35	39	77	39	87	39	95

[Ref. 20], who state that in general, propensity to leave decreases with age and length of service.

Of note was the change in career response in the variable gender. Positive response was the same for both males and females. This may indicate that those who remain in the service beyond an initial enlistment have the same attitudes in this case regardless of sex.

While the question of receiving a re-enlistment bonus occurs once per enlistment contract, a service members' economic and social status is re-enforced daily by the pay-grade a service member holds. Promotion to a higher paygrade represents increased economic compensation even through years of DoD pay caps. Perhaps of greater importance, promotion represents success and increased responsibility that is prominently displayed on the sleeve of the uniform. The first term response to the Rand survey question of re-enlistment in a reduced promotion environment, reproduced in Table XL, indicated entry age not to be a significant factor in this case. The response varies by only two per-cent for the entry age cohorts. However, the control vari-ables were all significant at the .001 level. Females and minorities indicated high levels of positive intent in comparison to males and Whites which, as in the previous analysis of various re-enlistment bonus scenarios, may illustrate the perception of these personnel that the mili-tary offers a better career opportunity for females and minorities than found in the civilian sector.

TABLE XL

RE-ENLISTMENT IN A REDUCED PROMOTION ENVIRONMENT, FIRST TERM

Sample Mean = 19 positive intentions

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.000
Male	3890	18	
Female	1055	24	
Race			0.000
Black	866	24	
Oriental	91	34	
White	3988	18	
Service			0.000
Air Force	1245	23	
Army	891	20	
Marines	1041	18	
Navy	1765	17	
Adjusted re-enlistment intent by Entry age			0.934
17-19	3541	19	
20-21	824	19	
22-24	432	20	
25-35	148	18	

The analysis of career response to a reduced promotion environment, presented in Table XLI, indicated that entry age is significant at the .032 level with the oldest entrants having much higher levels of positive intent than the youngest cohort.

Individuals with career intent on average were less sensitive to reduced promotion chances than those individuals on their first enlistment. The twenty year retirement plan may make career individuals less willing to sacrifice years in service solely on the basis of a reduced chance of promotion. In addition, the oldest age entrants may perceive themselves to be at an age where a career change may be difficult and are therefore more committed to a twenty year career than the younger aged recruits. The variable of service indicated promotion to be an element of service life that career sailors hold as more important than their uniformed DoD counterparts. The variable of race in this question indicated that while Orientals appeared less sensitive to reduced promotion rates than other racial cohorts, Black and White racial cohorts appear to have the same attitudes toward this military policy.

K. YEARS OF SERVICE INTENDED

Significant differences in intended years of service between different entry age cohorts would alter current projections of enlisted demand if changes in recruitment

TABLE XLI

RE-ENLISTMENT IN A REDUCED PROMOTION ENVIRONMENT, CAREER

Sample Mean = 36 positive intentions

Control Variables	Sample N	(% x 100)	Significance of F
Sex			0.002
Male	1167	37	
Female	263	29	
Race			0.523
Black	374	36	
Oriental	38	42	
White	1018	36	
Service			0.003
Air Force	246	44	
Army	485	37	
Marines	364	36	
Navy	335	29	
Adjusted re-enlistment intent by Entry age			0.032
17-19	1033	34	
20-21	224	40	
22-24	114	39	
25-35	39	53	

policy alter the present age distribution of recruits. Separate effects of age and length of service in manpower systems have been demonstrated by Young [Ref. 21]. Rand survey data concerning intended total length of service was analyzed to identify such effects in the military. Differences in first term and career effects were isolated by conducting two separate analyses. The results of the first term analysis are presented in Table XLII. The survey response should be viewed within the previously mentioned constraints by Aizen and Fishbein.

Since no actual result will be realized by the respondent's action and the question involves behavior intent far in the future, the sample mean of 5.70 years should not be interpreted as an accurate estimate of actual behavior. However, trends in variance from the sample mean would provide an indicator of the difference in intent of the entry age cohorts.

Entry age was not found to be significant for first term individuals. Of the control variables, service branch was found to be significant. Service branch indicated that, on average, individuals in the Air Force intended approximately two more years of service than individuals in the other three services. An investigation of individual service enlistment policies would be required to determine if a difference in the average length of enlistment contracts, rather than an aggregate difference in personal preference, is the major

TABLE XLII

YEARS OF SERVICE INTENDED, FIRST TERM

Sample Mean = 5.70 total years

Control Variables	Sample N	(yrs)	Significance of F
Sex			0.176
Male	4116	5.64	
Female	1101	5.91	
Race			0.400
Black	900	5.48	
Oriental	97	6.25	
White	4220	5.74	
Service			0.000
Air Force	1320	7.30	
Army	938	4.52	
Marines	1100	4.80	
Navy	1859	5.76	
Adjusted years of intended service by Entry age			0.306
17-19	3750	5.62	
20-21	872	5.90	
22-24	442	5.98	
25-35	153	5.83	

factor in the variance between the Air Force and the other three services.

Analysis of career intended years of service, presented in Table XLIII, indicated entry age to be significant at the .016 level. The oldest entrants indicated significantly higher levels of intended service than the younger entry cohorts.

The enlistment contract the respondent was serving indicated that the second or greater enlistment indicated total years of intended service to be over twice that of individuals on the first enlistment. In addition, the oldest entry cohort of career individuals indicated intended years of service that were significantly greater than the younger cohorts.

Intended length of service appears to be affected by entry age and length of service. Based on this analysis and reports of the effect of age on other manpower systems, changes in service policy which would result in larger percentages of older aged entrants may increase retention rates of uniformed DoD personnel.

Related to length of expected service is the final paygrade an individual expects to achieve while in the service. The survey question, "When you finally leave the military, what paygrade do you think you will have?", was used to evaluate aggregate perception of long term achievement within the scale of the paygrade structure and length of expected

TABLE XLIII

YEARS OF SERVICE INTENDED, CAREER

Sample Mean = 11.18

Control Variables	Sample N	(yrs)	Significance of F
Sex			0.086
Male	1191	11.23	
Female	266	10.94	
Race			0.003
Black	381	10.01	
Oriental	37	9.54	
White	1039	11.69	
Service			0.000
Air Force	247	14.50	
Army	492	9.84	
Marines	367	10.90	
Navy	351	10.05	
Adjusted years of intended service by Entry age			0.016
17-19	1047	11.08	
20-21	253	10.68	
22-24	116	10.82	
25-35	41	14.46	

service constraints. The question had thirteen possible responses from paygrade E-1 through W-4 with the warrant grades of W1 through W4 coded 10 through 13 respectively. The results of the analysis are presented in Table XLIV for first term respondents and in Table XLV for "career" respondents.

The sample mean of paygrade 4.89, for first term respondents, which equates to an average between E4 and E5 and a sample mean of 6.40, for career respondents are plausible estimates of expected final paygrades based on a heuristic analysis using the average intended length of service of 7.21 years reported for first term individuals in an earlier analysis and the knowledge that "career" for the purpose of the study meant only remaining in service beyond one enlistment contract. Entry age was significant at the .001 level, indicating entry age to be a significant factor in future behavior intent as to the final paygrade an individual expects to achieve. As entry age increased, the level of final expected paygrade increased.

The control variable of sex was found to be highly significant for first term respondents. Males expected a higher final paygrade than females. This result may indicate that females in the service may, on average, have lower self perceptions of career success in the military than their male counterparts in the first enlistment contract. For career individuals, however, differences between the final

TABLE XLIV

FINAL PAYGRADE ACHIEVED, FIRST TERM

(paygrade average, scale from E-1 through W-4)

Sample Mean = 4.89

Control Variables	Sample N	Paygrade	Significance of F
Sex			0.001
Male	4142	4.84	
Female	1106	5.06	
Race			0.579
Black	908	4.93	
Oriental	96	5.06	
White	4244	4.88	
Service			0.001
Air Force	1322	4.87	
Army	946	4.81	
Marines	1111	4.68	
Navy	1869	5.07	
Adjusted Final Paygrade Achieved by Entry age			0.001
17-19	3770	4.84	
20-21	877	4.99	
22-24	446	5.07	
25-35	155	5.04	

TABLE XLV

FINAL PAYGRADE ACHIEVED, CAREER

(paygrade average, scale from E-1 through W-4)
Sample Mean = 6.40

Control Variables	Sample N	Paygrade	Significance of F
Sex			0.258
Male	1189	6.41	
Female	264	6.34	
Race			0.026
Black	380	6.17	
Oriental	37	6.05	
White	1036	6.50	
Service			0.001
Air Force	247	6.38	
Army	493	6.13	
Marines	365	6.85	
Navy	348	6.23	
Adjusted final Paygrade Achieved by Entry age			0.001
17-19	1045	6.36	
20-21	251	6.28	
22-24	116	6.61	
25-35	41	7.65	

expected paygrade of individuals based on sex were not significant. This may indicate that those females who remain in the service beyond an initial enlistment contract may feel they are equal to males in terms of promotability. Differences in the final intended paygrade between the Air Force, Navy, Army and Marines, for both first term and career individuals, may be indicative of individual service policies which affect the perception of final paygrade attainment. The higher overall final paygrade expectations of career over first term individuals indicates that intended length of service is also a contributing factor in an individual's perception of the highest intended paygrade achieved while in the service. This would be expected due to length of service being one of the necessary requirements for promotion.

IV. CONCLUSION

A. SUMMARY

This study examined two data bases of non-prior service personnel; historical information on Naval personnel supplied by DMDC and branchwide DoD survey data administered by the Rand Corporation in 1978. The data bases were stratified by age at entry into four entry age cohorts and difference in cohort historical and intended behavior were measured based on indicators of desired attributes at accession, behavior while in the service and intended future behavior in relation to current or postulated DoD policy. Knowledge of significant differences in economic and social behavior based on entry age would be of value in any DoD policy formulation where age of the force is a factor in policy development.

Analysis of historical data indicated that in the Navy, as entry age increased, average AFQT performance increased. Also, older age entrants appeared to have a greater preference than the younger entry age cohorts toward initial ETS contracts of only four years. Possibly related to preference for the length of the initial service contract is the question of occupational choice. A high percentage of six-year ETS contracts are required for ratings that are in the high technical skill category. As entry age increased, the proportion of the entry age cohort in ratings of the high

technical skill category decreased. However, the older entry age cohorts who did enlist for a six-year ETS contract had a much larger proportion of the cohort in the high technical skill ratings category than the younger entry age cohorts.

Analysis of the FY78 all navy accession cohort indicated the 22-24 entry age cohort to have the lowest rate of first-term attrition for both four and six year contracts. While the oldest entrants had the highest first-term attrition rate for those individuals who enlisted for a four-year obligation, the oldest entrants were comparable to the 17-19 entry age cohort in terms of first-term attrition. The major reasons of failure to fulfill an initial ETS contract were for medical causes and failure to meet minimum performance and behavior standards.

Analysis of the 1978 DoD Survey indicated significant differences existed between the entry age cohorts as to what service individuals entered, marital status, promotion and re-enlistment intent, the amount of average monthly military compensation received, perceptions of civilian employment and attitudes toward military life. The differences in response in the majority of survey areas found that the aggregate response of older age entrants was often more positive than that of the 17-19 entry age cohort. This pattern indicated active recruitment of individuals past the age of twenty may improve the aggregate quality of recruits

based on several behavioral indicators such as education, economic knowledge of the civilian environment and attitudes toward military life.

While not part of the central focus of the analysis, significant differences were often found in behavior and behavior intent between the variables of sex, race, first-term and career enlistments and service branch the respondents were serving at the time of the survey.

B. AREAS FOR FURTHER STUDY

Further study of the current utilization of older individuals is needed to determine if in fact a current propensity exists for older individuals to access to Navy ratings that require lower skill requirements. Detailed analysis of individual training pipelines, controlling for co-variance of other variables which are co-determinants in the assignment process, would be required to determine if entry age is a major factor in either the assignment process or the individual's personal occupational preference.

A more detailed study of first-term attrition stratified by entry age would be needed to isolate specific causes of the difference in first-term attrition indicated by the study of the FY78 all Navy accession cohort. For example, a high incidence of older individuals being discharged for physical reasons not tied to occupational requirements could be corrected through administrative action.

While the study analyzed trends in economic behavior based on entry age, further study would be needed to determine actual pay elasticities based on entry age. Likewise, while the study found significant differences in intended behavior in areas of retention, follow-on studies would be required to determine actual behavior over time to confirm indicated trends based of behavior intent.

Finally, it should be noted that all individuals in the samples studied had one thing in common: they all enlisted in the Armed Forces. Parallel studies of both the civilian population and prior-service individuals who re-entered the service would be required to determine if the DoD population is representative of behavior found in the civilian sector.

While this study utilized data on non-prior service personnel stratified by age at entry from only the two above mentioned sources, other sources of data are available. DMDC maintains the following data files which may be of interest to individuals conducting further research the area of entry age; DoD-civilian central personnel data file, enlisted/officer master file, civilian cohort file, military reserve file, federal personnel statistical program and the military inpatient hospital file. In addition, information on prior-service individuals is contained in the enlisted/officer separation and re-enlistment file maintained by DMDC. Information on pre-service and post-service individuals can be found in the AFEE's examination and accession file, VA

education and training benefits file, DoD post-service survey file, military retiree and transition files. Information on the civilian population can be found in the census ZIP code summary file and the current population survey. Other sources of information can be found in the enlisted survival tracking file (STF) which contains both longitudinal and biographical information and is further explained in [Ref. 22], the 1979 DoD survey of personnel entering military service administered [Ref. 23] by the Rand Corporation to individuals upon entering military service. The National Longitudinal Survey of Labor Force Behavior, Youth Survey (NLS), selected in 1978 and interviewed in 1979 and 1980, is a nationally representative sample of approximately 12,000 American youth aged 15 to 23. The NLS sample was selected and designed to yield a data base of youth that can be statistically projected (within known confidence levels) to represent the entire population born in 1957 through 1964 and substantively important subgroups within this population [Ref. 24].

C. POLICY IMPLICATIONS

Analysis of AFQT scores and levels of formal educational attainment indicated that older individuals who accessed to the services are, on average, a more desirable group than 17-19 year olds. Active recruitment of older individuals may enhance the quality of the force based on these two measures of quality.

Analysis of first-term attrition of the FY78 Navy accession cohort indicated the 22-24 entry age cohort to have a greater propensity to remain in the Navy and complete a term of service. This indicates first-term retention could be increased by accessing larger numbers of individuals between the ages of 22-24.

Finally, the percentage of DoD non-prior accessions over the age of 21, presented in Table XLVI, indicate that throughout the life of the AVF, the percentage of older entrants has almost doubled. Differences in perceptions and behavior intent based on entry age, implied from this study of the 1978 DoD survey data, should be examined further.

TABLE XLVI

DoD NON-PRIOR SERVICE ACCESSIONS OVER AGE 21

(% of total accessions by FY)

FY	%
81	15.2
80	14.5
79	13.4
78	13.1
77	12.4
76	11.8
75	11.0
74	8.8

Source: DMDC

Conformation and quantification of personality and behavior intent differences based on entry age will be essential to the task of policy formulation as larger percentages of the

force come from accession cohorts other than the traditional 17-19 entry age cohort.

APPENDIX A

TECHNICAL SKILL REQUIREMENTS FOR U. S. NAVY RATINGS

Semi-Technical

ABE ABF ABH AK BM BT* HT* LI

MS PC PN RP SH SK SM YN

Technical

AD AG AME AMH AMS AO ASE ASH

ASM AW AZ BU CE CM CTA CTO

CTR DK BM DP DT EA EM* EN

EO GMG GMM GMT GSE* GSM* HM IC

IM IS JO ML MM* MN MR MU

OM OS OT PH PM PR QM RM*

SW TM UT

Highly Technical

AC AE AQ* AT* AK* CTI* CTM* CTT*

DS* ET* EW* PTB FTG* FTM* MT* STG*

TD

Source: [Ref. 25].

* Six year Obligated Service Requirement, Source: [Ref 18].

APPENDIX B

INTERSERVICE SEPARATION CODES

Release from Active Service

Expiration of term of Service_____01
Early Release - Insufficient Retainability__02
Early Release - To Attend School_____03
Early Release - Police Duty_____04
Early Release - In the National Interest____05
Early Release - Seasonal Employment_____06
Early Release - To Teach_____07
Early Release - Other (Including RIF)_____08

Medical Disqualification

Conditions Existing Prior to Service_____10
Disability- Serverance Pay_____11
Permanent Disability- Retired_____12
Temporary Disability- Retired_____13
Disability- Non EPTS- No Severance Pay_____14
Disability- Title 10 Retirement_____15
Unqualified for Active Duty- Other_____16

Dependency of Hardship

Dependency_____20
Hardship_____21
Dependency or Hardship____22

Death

Battle Casualty_____30
Non-Battle- Disease_____31
Non-Battle- Other_____32

Death- Cause Not Specified___33

Entry into Officer Programs

Officer Commissioning Program_____40
Warrant Officer Program_____41
Service Academy_____42

Retirement (Other than Medical)

20-30 Years of Service_____50
Over 30 Years of Service_____51
Other_____52

Failure to Meet Minimum Behavioral or Performance Criteria

character or Behavior Disorder_____60
Motivational Problems_____61
Enuresis_____62
Inaptitude_____63
Alcoholism_____64
Discreditable Incidents- Civilian or Military_____65
Shirking_____66
Drugs_____67
Financial Irresponsibility_____68
Lack of Dependent Support_____69
Unsanitary Habits_____70
Civil Court Conviction_____71
Security_____72
Court Martial_____73
Fraudulent Entry_____74
AWOL, Desertion_____75
Homosexuality_____76
Sexual Perversion_____77
Good of the Service_____78
Juvenile Offender_____79
Misconduct (Reason Unknown)_____80

Unfitness (Reason Unknown)_____81
Unsuitability (Reason Unknown)_____82
Basic Training Attrition_____84
Failure to Meet Minimum Qualifications for Retention__85
Expeditious Discharge_____86
Trainee Discharge_____87

Other

Secretarial Authority_____90
Erroneous Enlistment or Induction____91
Sole Surviving Son_____92
Marriage_____93
Pregnancy_____94
Minority_____95
Conscientious Objector_____96
Parenthood_____97
Breach of Contract_____98
Other_____99

Source: DMDC Memorandum, M&I B-2, 24 August, 1979.

APPENDIX C

DOD 1978 ENLISTED QUESTIONNAIRE FORM ONE

I. Military Background

1. Record time began, enter military hour:

Time Began _____

2. In what month are you completing this survey?

January 1979 _____01
February 1979_____02
March 1979_____03
April 1979_____04
May 1979_____05
June 1979_____06

3. In what service are you now serving?

Army_____1
Navy_____2
Marine Corps_____3
Air Force_____4

4. What is your present pay grade?

E1 E2 E3 E4 E5 E6 E7 E8 E9

5. Are you currently assigned to a ship?

Yes_____1
No_____2

6. Where is your present permanent post, base or duty station? If

STATES

Alabama	01	Montana	27
Alaska	02	Nebraska	28
Arizona	03	Nevada	29
Arkansas	04	New Hampshire	30
California	05	New Jersey	31
Colorado	06	New Mexico	32
Connecticut	07	New York	33
Delaware	08	North Carolina	34
District of Columbia	09	Ohio	36
Florida	10	Oklahoma	37
Georgia	11	Oregan	38
Hawaii	12	Pennsylvania	39
Idaho	13	Rhode Island	40
Illinois	14	South Carolina	41
Indiana	15	South Dakota	42
Iowa	16	Tennessee	43
Kansas	17	Texas	44
Kentucky	18	Utah	45
Louisiana	19	Vermont	46
Maine	20	Virginia	47
Maryland	21	Washington	48
Massachusetts	22	West Virginia	49
Michigan	23	Wisconsin	50
Minnesota	24	Wyoming	51

Mississippi____25 Missouri_____26

FOREIGN COUNTRIES

Africa_____52 Belgium_____53
Caribbean_____54 Diego Garcia_____55
East Asia_____56 Eastern Europe_____57
Germany_____58 Greece_____59
Guam_____60 Iceland_____61
Iran_____62 Italy_____63
Japan or OKinawa____64 Near East_____65
Netherlands_____66 Panama Canal Zone___67
Philippines_____68 Portugal_____69
South Korea_____70 Spain_____71
Turkey_____72 United Kingdom_____73

Other overseas location
not listed above____74

7. How do you feel about your current location? Please mark the number which shows your opinion on the line below. For example, people who are Very Satisfied with their current location would mark 7. People who are Very Dissatisfied with their current location would mark 1. Other people may have opinions somewhere between 1 and 7.

VERY DISSATISFIED VERY SATISFIED

1---2----3----4----5----6----7

8. To the nearest year and month, how long have you been on active duty? (if you had a break in service, count time and time in previous tours.)

YEARS __

and

MONTHS __

9. In which enlistment period are you serving? If you received an EXTENSION to your current enlistment period, do not count this as a new enlistment period.

1st 2ed 3rd 4th 5th or more

* IF THIS IS YOUR FIRST ENLISTMENT, GO TO Q14 *

10. Which of the following did you receive as part of or since your last reenlistment contract?

MARK ALL THAT APPLY

Proficiency Pay _____1
Guaranteed Location of Duty Station ___1
Guaranteed Length of Assignment_____1
Guaranteed Training or Retraining in a new MOS/Rating/AFSC_____1
Guaranteed Job Assignment_____1
Improved Promotion Opportunity_____1
None of the above_____1

11. Which of the following reenlistment bonuses did you receive at your last enlistment? Be sure to mark all that apply.

I did not receive a reenlistment bonus__1
Regular Reenlistment Bonus (RRB) _____1
Selective Reenlistment Bonus (SRB)------1
Variable Reenlistment Bonus (VRB)_____1
Other Reenlistment Bonus (Record type below)_____1

* IF YOU
DID NOT
RECEIVE A REENLISTMENT BONUS, GO TO Q14 *

12. What is the total amount, before taxes and other deductions, that you will receive from reenlistment bonuses during your current enlistment?

TOTAL REENLISTMENT BONUS $__,___

13. How much of this reenlistment bonus payment did you receive during 1978?

None _____00000

Amount received in 1978 $__,___

14. How soon will you complete your current enlistment INCLUDING ANY EXTENSIONS YOU HAVE NOW?

Less than 3 months_____1
At least 3 months but less than 6 months___2
At least 6 months but less than 9 months___3
At least 9 months but less than 12 months__4
At least 1 year but less than two years____5
At least 2 years but less than 3 years_____6
At least 3 years or more_____7

A. REENLISTMENT/CAREER INTENT

15. When you finally leave the military, how many total years of service do you expect to have?

Years __

16. When you finally leave the military, what pay grade do think you will have? Mark One.

ENLISTED GRADES: E1 E2 E3 E4 E5 E6 E7 E8 E9

WARRANT GRADES: W1 W2 W3 W4

17. When you finally leave the military, do you plan to join a National Guard or Reserve unit?

Definitely Yes_____1
Probably Yes_____2
Probably No_____3
Definitely No_____4
Don't Know/Not sure_____5

18. Suppose there was a new military program that service personnel could participate in after they leave the military. The program requires that you must keep the military informed of your address and you could be recalled to service in the event of a national emergency. However, you would not be required to attend drills or serve on active duty, unless there was an emergency.

If you were given a bonus of $200 for each year you participated in this program, how many years would you be willing to stay in this program?

No years_____00
1 year_____01
2 years_____02
3 years_____03
4 years_____04
5 years_____05

6 or more_____06

19. What are the chances that your next tour of duty will be in an undesirable location? Mark one.

Does not apply, I plan to retire_____-7
No chance _____(0 in 10)_____00
Very slight possibility__(1 in 10_____01
Slight possibility_____(2 in 10)_____02
Some possibility_____(3 in 10)_____03
Fair possibility_____(4 in 10)_____04
Fairly good possibility__(5 in 10)_____05
Good possibility_____(6 in 10)_____06
Probable_____(7 in 10)_____07
Very probable _____(8 in 10)_____08
Almost sure_____(9 in 10)_____09
Certain_____(10 in 10)____10
Don't know where I'll be assigned next_-8

20. HOw likely are you to reenlist at the end of your current term of service? Assume that no Reenlistment Bonus Payments will be given, but that all other special pays which you currently receive are still available. Mark one.

Does not apply, I plan to retire_____-7
No chance _____(0 in 10)_____00
Very slight possibility__(1 in 10_____01
Slight possibility_____(2 in 10)_____02
Some possibility_____(3 in 10)_____03
Fair possibility_____(4 in 10)_____04
Fairly good possibility__(5 in 10)_____05
Good possibility_____(6 in 10)_____06
Probable_____(7 in 10)_____07
Very probable _____(8 in 10)_____08

Almost sure_____(9 in 10)_____09
Certain_____(10 in 10)____10
Don't know _____-8

21. Think for a minute about the different reenlistment options that are currently available to personnel in your service. If you decided to reenlist at the end of your current term of service, which reenlistment period would you sign up for? Mark one.

2 years 3 years 4 years 5 years 6 years

- If you have been on active duty
12 YEARS OR MORE,
Go to Q26 -

NOTE: QUESTIONS 22-25 ARE NOT ANSWERED BY ALL RESPONDENTS:

- If the respondent has been on active duty for 12 YEARS OR MORE
(See Q8), then the Respondent should NOT answer Q22-Q25.
(Refer to special
instruction above Q22).

- If the respondent has been on active duty for LESS THAN 12 YEARS
(See Q8), then Q22-Q25 should be answered.

- IF YOU HAVE BEEN ON ACTIVE DUTY 12 YEARS OF MORE, GO TO Q26 -

PLEASE INDICATE IN THE FOLLOWING QUESTIONS HOW LIKELY YOU WOULD BE TO REENLIST AT THE END OF YOUR CURRENT TERM OF SERVICE IF THE FOLLOWING OPTIONS WERE AVAILABLE.

22. How likely would you be to reenlist at the end of your current term of service if you were guaranteed a choice of location for your next tour? Assume that no Reenlistment Bonus Payments will be given but that all other special pays which you currently receive are still available.

No chance _____(0 in 10)_____00
Very slight possibility__(1 in 10_____01
Slight possibility_____(2 in 10)_____02
Some possibility_____(3 in 10)_____03
Fair possibility_____(4 in 10)_____04
Fairly good possibility__(5 in 10)_____05
Good possibility_____(6 in 10)_____06
Probable_____(7 in 10)_____07
Very probable _____(8 in 10)_____08
Almost sure_____(9 in 10)_____09
Certain_____(10 in 10)____10
Don't know _____-8

23. How likely would you be to reenlist at the end of your current term of service if military personnel in your career field received a $ 4,000 bonus?

No chance _____(0 in 10)_____00
Very slight possibility__(1 in 10_____01
Slight possibility_____(2 in 10)_____02
Some possibility_____(3 in 10)_____03
Fair possibility_____(4 in 10)_____04
Fairly good possibility__(5 in 10)_____05
Good possibility_____(6 in 10)_____06
Probable_____(7 in 10)_____07
Very probable _____(8 in 10)_____08
Almost sure_____(9 in 10)_____09
Certain_____(10 in 10)____10
Don't know _____-8

24. How likely would you be to reenlist at the end of your current term of service if military personnel in your career field received a $ 8,000 bonus?

No chance	(0 in 10)	00
Very slight possibility	(1 in 10	01
Slight possibility	(2 in 10)	02
Some possibility	(3 in 10)	03
Fair possibility	(4 in 10)	04
Fairly good possibility	(5 in 10)	05
Good possibility	(6 in 10)	06
Probable	(7 in 10)	07
Very probable	(8 in 10)	08
Almost sure	(9 in 10)	09
Certain	(10 in 10)	10
Don't know		-8

25. How likely would you be to reenlist at the end of your current term of service if military personnel if a Two Year Reenlistment Period were available? Assume that no Reenlistment Bonus Payments will be given, but that all other special pays which you currently receive are still available.

No chance	(0 in 10)	00
Very slight possibility	(1 in 10	01
Slight possibility	(2 in 10)	02
Some possibility	(3 in 10)	03
Fair possibility	(4 in 10)	04
Fairly good possibility	(5 in 10)	05
Good possibility	(6 in 10)	06
Probable	(7 in 10)	07
Very probable	(8 in 10)	08
Almost sure	(9 in 10)	09
Certain	(10 in 10)	10

Don't know _____-8

26. In what month and year were you promoted to your present pay grade?

January 19__

Febuary

March

April

May

June

July

August

September

October

November

December

27. What do you think your chances are of being promoted to the next higher pay grade? Mark one.

Does not apply, I plan to retire_____-3
Does not apply, I plan to leave the service_____-3
Does not apply, I do not expect any more promotions__-3

No chance _____(0 in 10)_____00
Very slight possibility__(1 in 10_____01
Slight possibility_____(2 in 10)_____02
Some possibility_____(3 in 10)_____03

Fair possibility_____(4 in 10)_____04
Fairly good possibility__(5 in 10)_____05
Good possibility_____(6 in 10)_____06
Probable_____(7 in 10)_____07
Very probable _____(8 in 10)_____08
Almost sure_____(9 in 10)_____09
Certain_____(10 in 10)____10
Don't know _____-8

28. Think for a minute about other military personnel who have the same total years of service that you have. Which of the following statements best describes when you expect your next promotion?

Does not apply, I plan to retire_____10
Does not apply, I plan to leave the Service_09
Does not apply, I do not expect any more promotions_____08
EARILER than most people who have the same total years of service_____1
AT ABOUT THE SAME time as most people who have the same total years of service_____2
LATER than most people who have the same total years of service_____3

29. How soon do you expect your next promotion? Mark one.

Does not apply, I plan to retire_____10
Does not apply, I plan to leave the service_____09
Does not apply, I do not expect any more promotions_____08
Less than 1 year_____01
At least 1 year but less than 2 years_____02

At least 2 years but less than 3 years_____03
At least 3 years but less than 4 years_____04
At least 4 years but less than 5 years_____05
At least 5 years but less than 6 years_____06
6 or more years_____07
Don't know_____08

30. Suppose you knew that your chances of being promoted to the next higher pay grade were reduced by 50% because of reduced manpower requirements. How likely would you be to reenlist at the end of your current term of service if your knew that your promotion opportunity was reduced?

Does not apply, I plan to retire_____-7

No chance _____(0 in 10)_____00
Very slight possibility__(1 in 10_____01
Slight possibility_____(2 in 10)_____02
Some possibility_____(3 in 10)_____03
Fair possibility_____(4 in 10)_____04
Fairly good possibility__(5 in 10)_____05
Good possibility_____(6 in 10)_____06
Probable_____(7 in 10)_____07
Very probable _____(8 in 10)_____08
Almost sure_____(9 in 10)_____09
Certain_____(10 in 10)____10
Don't know _____-8

31. Below are some reasons military personnel may have for leaving the Armed Forces. If you have considered leaving the service at the end of your current term, please mark the three most important reasons why you would leave the service.

Q31A. Does not apply, I have not considered leaving

leaving the service (Go to Q. 32) _____ 1

Q31B. Does not apply, I plan to retire at the end of my current term (Go to 32) _____ 1

Q31C. Not eligible to reenlist _____ 1

Q31D. Dislike location of my assignments _____ 1

Q31E. Frequency of PCS moves _____ 1

Q31F. Dislike being separated from my family _____ 1

Q31G. My family wants me to leave the service _____ 1

Q31H. Disagree with personnel policies _____ 1

Q31I. Discrimination against military personnel based on sex, race, or rank _____ 1

Q31J. Not enough opportunity for advancement _____ 1

Q31K. Low pay and allowances _____ 1

Q31L. Better civilian job opportunities _____ 1

Q31M. Reduction in military benefits _____ 1

Q31N. Decline in quality of military personnel _____ 1

Q31O. Unable to practice my job skills _____ 1

Q31P. Bored with my job _____ 1

Q31Q. Don't like my job _____ 1

Q31R. Plan to continue my education/use G.I. /VEAP benefits _____ 1

B. MILITARY WORK EXPERIENCE

32. Follow the instructions below for your service:

ARMY: Record your <u>current</u> Primary MOS and the <u>first</u> Primary Mos that you received when you entered active duty. Use the first four entries of your MOS. For example, MOS 11B20 would be marked as 11B2.

NAVY: Record your <u>current</u> Primary Rating and the <u>first</u> Primary Rating that you received when you entered active duty. Use all four entries of your Rating. For example, GMM3 would be marked as GMM3. BMSN would be marked as BMSN.

MARINE CORPS: Record your <u>current</u> Primary MOS and the <u>first</u> Primary Mos that you received when you entered active duty. Use the four numbers of your MOS. For example, MOS 0311 would be marked as 0311.

AIR FORCE: Record your <u>current</u> Primary MOS and the <u>first</u> Primary Mos that you received when you entered active duty. Use the first four numbers of your AFSC-- DO NOT USE LETTERS. For example, AFSC A43130C would be marked as 4313.

INSTRUCTIONS: Write ONE number or letter in each box. Then, mark the matching circle below each box.

A. MY <u>CURRENT</u> PRIMARY MOS/RATING/AFSC IS:

--	--	--	--
First Letter/Number	Second Letter/Number	Third Letter/Number	Fourth Letter/Number

I don't know my Current Primary MOS/RATING/AFSC

B. MY FIRST PRIMARY MOS/RATING/AFSC AT ENTRY WAS:

--	--	--	--
First Letter/Number	Second Letter/Number	Third Letter/Number	Fourth Letter/Number

I don't know my
<u>First</u>
Primary MOS/RATING/AFSC

33. Which of the following best describes the kind of work that you do now?

Mark One

Most of my time is spent SUPERVISING people _____1

Most of my time is spent PERFORMING my work skills___2

34. LAST MONTH, how much of the time did you work in jobs outside your current Primary MOS/RATING/AFSC?

Most of the time _____1

About half of the time _____2

Some of the time _____3

Very little of the time_____4

None of the time_____5

Now a few questions about your work schedule during the last seven days. Record your answers in Chart No. 1 below. During the last 7 days, how many hours did you spend . . .

35 . . . working during regular daytime hours -- that is , 6:00 a.m. to 6:00 p.m., Monday through Friday?

36 . . . working during hours OTHER THAN regular daytime hours? Please count hours worked during the EVENINGS, AT NIGHT, ON WEEKENDS AND OTHER HOURS NOT INCLUDING 6:00 a.m. to 6:00 p.m., Monday through Friday.

37. Please add the number of hours listed in Q35 and Q36 and enter in boxes below for Q37.

CHART No. 1

35. HOURS WORKED DURING REGULAR DAYTIME HOURS_____A.

36. HOURS WORKED OTHER THAN REGULAR DAYTIME HOURS____B.

37. TOTAL HOURS WORKED LAST WEEK_____C.

A + B = C

38. Please check: is the number you entered in Q37 the TOTAL NUMBER OF HOURS THAT YOU WORKED DURING THE LAST WEEK? IF NOT PLEASE CORRECT THE ANSWERS IN THE PRECEDING BOXES FOR Q35, 36, AND 37.

Q. 38 WAS NOT PROCESSED

39. In the last seven days, how many hours were you on call/ on alert status/on a duty roster?

None .

C. INDIVIDUAL CHARACTERISTICS

40. Are you male or female?

Male_____1
Female_____2

41. How old were you on your last birthday?

AGE LAST BIRTHDAY _____

42. When you FIRST ENTERED ACTIVE SERVICE, how old were you?

AGE AT ENTRY _____

43. When you FIRST ENTERED ACTIVE SERVICE, did you receive an Enlistment Bonus?

Yes _____1
No_____2

I don't remember__-8

44. What do you consider to be your main racial or ethnic group?

Mark one

Afro-American/Black/Negro_____1
American Indian/Alaskan Native_____2
Hispanic/Puerto Rican/Mexican/
Cuban/Latin/Chicano/Other Spanish_____3
Oriental/Asian/Chinese/Japanese/
Korean/Filipino/Pacific Islander_____4
White/Caucasian_____5
Other_____6

Specify:

45. When you FIRST ENTERED ACTIVE SERVICE, what was your marital status?

Married_____1
Widowed_____2
Divorced_____3
Separated_____4
Single, never married___5

46. What is your marital status NOW/

Married_____1
Widowed_____2
Divorced_____3
Separated_____4
Single, never married___5

IF YOU
ARE NOT

MARRIED NOW, GO TO Q51.

47. How many years have you been married to your current spouse?

-o less than 1 year

YEARS MARRIED _____

48. How old was your spouse on his or her last birthday?

_____

49. Has your SPOUSE ever served on active duty in the military service? Mark all that apply.

A. No, my spouse has never served _____0

B. Yes, my spouse is
CURRENTLY SERVING

Enlistee_____1
Officer_____2

C. Yes, my spouse
PREVIOUSLY SERVED
AS AN:

Enlistee_____3
Officer_____4

50. What is the highest grade or year of regular school or college that your spouse has completed and gotten credit for? Mark one.

ELEMEMTARY GRADES: 1st 2nd 3rd 4th 5th 6th 7th 8th

HIGH SCHOOL GRADES: 9th 10th 11th 12th (include GED)

COLLEGE-YEARS OF CREDIT: 1 2 3 4 5 6 7 8 or more

51. when you FIRST ENTERED ACTIVE SERVICE, what was the highest grade or year of regular school or college you had COMPLETED and GOTTEN CREDIT for? Mark one.

ELEMEMTARY GRADES: 1st 2nd 3rd 4th 5th 6th 7th 8th

HIGH SCHOOL GRADES: 9th 10th 11th 12th (include GED)

COLLEGE-YEARS OF CREDIT: 1 2 3 4 5 6 7 8 or more

52. AS OF TODAY, what is your highest education level? mark one.

ELEMEMTARY GRADES: 1st 2nd 3rd 4th 5th 6th 7th 8th

HIGH SCHOOL GRADES: 9th 10th 11th 12th (include GED)

COLLEGE-YEARS OF CREDIT: 1 2 3 4 5 6 7 8 or more

53. Do you have a GED Certificate of a High School Diploma?

I have a GED Certificate_____1

I have a High School Diploma_____2

I do not have a GED certificate or High School Diploma_____3

54. How many dependents do you have? Do not include yourself or your spouse.

None_____00
1_____01
2_____02
3_____03
4_____04
5_____05
6_____06
7_____07
8_____08
9_____09
10 or more_____10

* IF NONE, GO TO Q57. *

THE NEXT TWO QUESTIONS ARE ABOUT THE DEPENDENTS YOU COUNTED IN Q54.

55. How many of your dependents are children, including stepchildren and adopted children, who are UNDER 14 YEARS OLD?

None_____00
1_____01
2_____02
3_____03
4_____04
5_____05
6_____06
7_____07
8_____08
9_____09
10 or more_____10

56. How many of your dependents are children, including stepchildren and adopted children, who are 14 YEARS OR OLDER?

None_____00
1_____01
2_____02
3_____03
4_____04
5_____05
6_____06
7_____07
8_____08
9_____09
10 or more_____10

57. How many people, including your spouse, are living with your now at your current location? Mark one.

None_____00
1_____01
2_____02
3_____03
4_____04
5_____05
6_____06
7_____07
8_____08
9_____09
10 or more_____10

D. CURRENT HOUSING ARRANGEMENTS

58. In what type of housing do you currently live? Mark One.

I live in civilian housing_____1

I live in the following type of military quarters:

On board Ship_____2

Open Bay/Troop Barracks_____3

Bachelor Enlisted Quarters (BEQ)_____4

ON-BASE Military Family Housing_____5

OFF-BASE Military Family Housing, including leased and rental guaranteed housing_____6

59. How do you feel about your current housing? Mark one number on the line below.

VERY DISSATISFIED						VERY SATISFIED
O	O	O	O	O	O	O
1	2	3	4	5	6	7

60. Suppose you had to rent civilian housing at your current location -- How much do you think you would have to pay PER MONTH, <u>including utilities</u>, for civilian housing in this area? Please give your best estimate.

$_,___

** IF YOU LIVE IN MILITARY HOUSING, GO TO QUESTION 64 **

61. Which of the following best describes your main reason for living in civilian housing? Mark One.

I am not eligible to live in military housing _____1
I'm waiting to be assigned to military housing_____2
Military housing was not available_____3
I prefer civilian housing_____4
I have other reasons_____5

62. Is the CIVILIAN HOUSING that you live in now --

Owned or being bought by you or someone in your household_____1
Rented for cash_____2
Occupied without payment of cash rent_____3

* IF YOU
OWN YOUR CURRENT RESIDENCE, GO TO Q64. *

63. LAST MONTH, what did you pay for rent and utilities for the civilian housing that you live in now?

$_,___

64. How many homes do you own? Mark one.

None _____0
1_____1
2_____2
3 or more_____3

* IF YOU
DO NOT
OWN ANY HOMES, GO TO Q69. *

The next few questions are about the home that you own. If you own more than one home, answer the following questions about your main residence.

65. In what year did you get this home?

19__

66. What was the purchase price of this home?

$___,___

67. LAST MONTH, what was your monthly mortgage payment for this home?

$_,___

68. Were real estate taxes included in the mortgage payment listed in Q67?

Yes_____1
No_____0

E. MILITARY COMPENSATION AND BENEFITS

69. What is th amount of your MONTHLY basic pay before taxes and other deductions? If you don't know the exact amount, please give your best estimate.

$_,___

70. What is the amount of your MONTHLY basis Allowance of Quarters (BAQ)? BAQ is a cash payment for housing. If you don't know the exact amount, please give your best estimate.

o I do not receive a BAQ =000

$___

71. What is the amount of your MONTHLY Basic Allowance for Subsistence (BAS)? BAS is a cash payment for food. If you don't know the exact amount, please give your best estimate.

o I do not receive a BAS =000

$___

72. Which of the following special monthly pays or allowances do you currently receive? Be sure to mark all that apply.

I don't receive any special monthly pays_____1
Jump Pay_____1
Sea Pay_____1
Submarine Pay_____1
Flight Pay_____1
Foreign Duty Pay_____1
Pro Pay_____1
COLA (Overseas Cost of Living Allowance)_____1
Overseas Special Housing Allowance_____1
Other Special Pays or Allowances--Specify below_____1

* IF YOU DO NOT RECEIVE ANY SPECIAL MONTHLY PAYS, GO TO Q74. *

73. How much moneyk do you currently receive each month, before taxes and other deductions, from the special monthly pays and allowances listed in Q72?

$_,___

74. On the average, about how much money do you, your spouse or your dependents spend <u>each month</u> in the <u>military exchanges</u> (e.g. PX, BX, Ship Store, etc.)? Please give your best estimate.

$_,___

75. About how much money do you, your spouse or your dependents spend <u>each month</u> in <u>military commissaries</u>? Please give your best estimate.

$_,___

76. About how much money do you, your spouse or your dependents spend <u>each month</u> in <u>civilian grocery stores</u>? Please give your best estimate.

$_,___

77. Suppose you are assigned to a duty station where Military Medical Services, Military Commissaries and Military Exchanges <u>are not</u> available. At tht duty station you would be paid <u>three additional monthly allowances</u> to make up for the lack of these services.

A. How much of an additional monthly allowance do you think would be fair to make up for the lack of MILITARY MEDICAL SERVICES at such a location?

Fair Montly
Allowance for Medical Services $___

B. How much of an additional monthly allowance do you think would be fair to make up for the lack of MILITARY COMMISSARIES at such a location?

Fair Montly
Allowance for Military
Commissaries $___

C. How much of an additional monthly allowance do you think would be fair to make up for the lack of MILITARY EXCHANGES at such a location?

Fair Montly
Allowance for Military
Exchanges $___

78. How much money do you currently contribute <u>each month</u> to the Veteran Education Assistance Program (VEAP)?

I am not eligible to participate in VEAP_____0
I am eligible but I do not participate in VEAP___1
$50 per month_____2
$55 per month_____3
$60 per month_____4
$65 per month_____5
$70 per month_____6
$75 per month_____7

79. During 1978, how much money did your service contribute to pay for your educational expenses at at civilian school?

o none
$_,___

80. AS OF TODAY, how many <u>unused</u> official military leave days do you have?

o none
UNUSED LEAVE DAYS __

81. In the past 5 years-- that is from 1974 to now, how many military leave days did you turn in for a cash payment at the time you reenlisted?

Does not apply, I never reenlisted___-7
None_____0

F. MILITARY RETIREMENT SYSTEM

82. Currently, all military personnel who retire after 20 or more years of service are given retirement benefits which begin immediately upon retirement and continue for life. People who leave the service with 20 years of service receive 50% of their basic pay as retirement benefits.

Suppose you retired with 26 years of service --under the current retirement system, what percent of your basic pay would you receive as retirement pay?

__%

83. Suppose you retired with 20 years of service at an E-7 pay grade and you had to choose the way in which your retirement benefits would be paid. Which of the following would you choose? The payments listed below would be the initial payment schedule; however, your future payments would be adjusted for inflation and taxed in the same way as the current retirement system.

Mark One

$5,800 a year for a lifetime_____1
$6,600 a year for 20 years_____2
$9,140 a year for 10 years_____3

$14,810 a year for 5 years_____4

$32,350 a year for 2 years_____5

A lump sum of $56,150 at the time of retirement_____6

84. Suppose the Armed Forces had a <u>different</u> retirement plan in effect at the time you <u>first</u> entered active service. under this new plan, people who remain in the military for <u>10 or more years</u> would receive the following two benfefits:

A special lump sum bonus at the time they leave the service. This bonus would be <u>taxed</u>.

and Retirement pay.

If the benefits shown below had been available at the time you <u>first</u> entered active service, how many total years would you have <u>planned to serve in the military</u>? <u>Enter your answer in A. below</u>.

DESCRIPTION OF DIFFERENT RETIREMENT PLAN

YEARS OF SERVICE_____A.

AMOUNT OF LUMP SUM BONUS YOU WOULD RECEIVE AT THE TIME YOU RETIRED_____B.

AMOUNT OF BASIC PAY YOU WOULD RECEIVE AS RETIREMENT BENEFITS_____C.

AGE WHEN RETIREMENT BENEFITS WOULD BEGIN_____D.

A_____B_____C_____D.

10_____$0_____0%_____less than none

10	8,000	20.0%	65 years old
11	10,000	22.5%	65
12	12,000	25.0%	65
13	14,000	27.5%	65
14	16,000	30.0%	65
15	20,000	32.5%	62
16	24,000	35.0%	62
17	28,000	37.5%	62
18	32,000	40.0%	62
19	36,000	42.5%	62
20	40,000	45.0%	62
21	43,000	48.0%	60
22	46,000	51.0%	60
23	49,000	54.0%	60
24	52,000	57.0%	60
25	54,000	60.0%	60
26	56,000	63.0%	60
27	58,000	66.0%	60
28	60,000	69.0%	60
29	62,000	72.0%	60
30	64,000	75.0%	55

A. UNDER THIS PLAN, I WOULD HAVE PLANNED TO SERVE:

EXPECTED YEARS OF SERVICE __

B. If you had served the number of years you entered in Q84A, What pay grade do you think you would have had when you left the military? Mark One.

ENLISTED GRADES: E1 E2 E3 E4 E5 E6 E7 E8 E9

WARRANT GRADES: W1 W2 W3 W4

85. If you had a choice, which military retirement

plan would you choose?

Mark One

Military Retirement Plan Described in Question 84 _____ 1

Current Military Retirement Plan _____ 2

G. CIVILIAN LABOR FORCE EXPERIENCE

86. During 1978, how many hours a week did you spend on the average working at a civilian job or at your own business during your off-duty hours?

o none (Go to Q88)

AVERAGE # HOURS PER WEEK __

87. Altogether in 1978, what was the total amount that you earned, before taxes and other deductions, for working during your off-duty hours?

$__,___

* IF YOU ARE NOT MARRIED, GO TO Q91.*

The next few questions are about your spouse's employment.

88. Last week, was your SPOUSE working full time or part time, going to school, keeping house, or doing something else? My spouse was:

Mark all that apply

In the Armed Forces _____ 1

Working full time in civilian job _____ 1

Self-employed in his or her own business_____1

With a job, but not at work because of TEMPORARY illness, vacation , strike, etc_____1

Unemployed, laid off, looking for work_____1

Retired_____1

In School_____1

Keeping house/Responsible for child care_____1

Other_____1

89. In 1978, how many weeks did your SPOUSE work for pay, either full or part-time, at a civilian job, not counting work around the house? Include weeks that your spouse was on paid vacation and paid sick leave.

o None (Go to Q91)

WEEKS _____

90. Altogether in 1978, what was the total amount, before taxes and other deductions, that YOUR SPOUSE earned from a civilian job or his or her own business?

o None

CIVILIAN EARNINGS OF SPOUSE IN 1978 $__,___

H. FAMILY RESOURCES

91. During 1978, did you or your spouse receive any income from the following sources? MARK 'YES' OR 'NO' FOR EACH ITEM.

	YES	NO
Social Security or Railroad Retirement?_____	1	0

Supplementary Security Income?_____1 0

Public Welfare or Assistance?_____1 0

Government Food Stamps?_____1 0

Unemployment Compensation of Workmen's Compensation?_____1 0

Interest and Dividends on Savings, Stocks, Bonds, or other Investments?_____1 0

Pensions from Federal, State or Local Government Employment?_____1 0

Pensions from Private Employer or Union_____1 0

Alimony, Child Support or other Regular Contributions from persons not Living in Your Household?_____1 0

Anything else, not including earnings from wages or salaries?_____1 0

92. During 1978, how much did you or your spouse receive from the sources listed in Q91? do not include earnings from wages or salaries in this question. Just give your best estimate.

o No income from sources in Q91

$ __,___

93. What was your family's TOTAL INCOME, before taxes and other other deductions, from all military and civilain sources for all of last year-- 1978? Please include civilian earnings that you listed in Q87, Q90, and Q92, your yearly military earnings and any other income in 1978.

1978 TOTAL INCOME $__,___

94. As of today, what is your estimate of the total amount of outstanding debts that you may have? Exclude any mortgage.

Mark One

No debts_____1
$1-$499_____2
$500-$1,999_____3
$2,000-$4,999_____4
$5,000-$9,999_____5
$10,000-$14,999_____6
$15,000 or more_____7

95. What would you say is the total value of any savings accounts, checking accounts or cash, U.S. Savings Bonds, stocks or securities that you may have right now?

Mark One

$0_____1
$1-$499_____2
$500-$1,999_____3
$2,000-$4,999_____4
$5,000-$9,999_____5
$10,000-$14,999_____6
$15,000 or more_____7

96. Compared to three years ago, is your financial situation now--

A Lot Better than 3 Years ago_____1
Somewhat Better than 3 Years ago _____2
About the Same as 3 Years ago_____3
Somewhat Worse than 3 Years ago_____4
A Lot Worse than 3 Years ago_____5

I. CIVILIAN JOB SEARCH

97. In the past 12 months, did you receive any job offers for a civilian job which you could take if you leave the service?

Yes_____1
No_____0

98. If you were to leave the service NOW and try to find a civilain job, how likely would you be to find a <u>good civilian job</u>?

No chance _____(0 in 10)_____00
Very slight possibility__(1 in 10_____01
Slight possibility_____(2 in 10)_____02
Some possibility_____(3 in 10)_____03
Fair possibility_____(4 in 10)_____04
Fairly good possibility__(5 in 10)_____05
Good possibility_____(6 in 10)_____06
Probable_____(7 in 10)_____07
Very probable _____(8 in 10)_____08
Almost sure_____(9 in 10)_____09
Certain_____(10 in 10)____10
Don't know _____-8

99. If you left the service right NOW, how much would you expect to earn <u>PER YEAR</u> in wages and salary if you took a full-time civilian job? DO NOT INCLUDE FRINGE BENEFITS.

EXPECTED ANNUAL
CIVILIAN
EARNINGS $__,___

I don't know what I can earn in civilian life. . . . -8

100. Suppose you were to leave the service NOW and try to find a civilian job. How likely would you be to find a civilian job that uses the skills in your military career field?

No chance	(0 in 10)	00
Very slight possibility	(1 in 10	01
Slight possibility	(2 in 10)	02
Some possibility	(3 in 10)	03
Fair possibility	(4 in 10)	04
Fairly good possibility	(5 in 10)	05
Good possibility	(6 in 10)	06
Probable	(7 in 10)	07
Very probable	(8 in 10)	08
Almost sure	(9 in 10)	09
Certain	(10 in 10)	10
Don't know		-8

101. Again, suppose that you were to leave the service NOW to take a civilian job. In what state or country would you probably live? PLEASE CHECK THE LIST OF STATE AND FOREIGN COUNTRY CODES IN QUESTION 6 AND RECORD THE NAME OF THE LOCATION AND ITS TWO-DIDIT CODE NUMBER BELOW.

I never thought about a location	78
I'd go wherever I could find a job	77

NAME OF STATE/COUNTRY	CODE#
_____	____

102. If you were to leave the service NOW and take a civilian job, how do you think the job would compare with your present military job in regard to the following work conditions?

Civilian Job Would Be A Lot Better _____A.
Civilian Job Would Be Slightly Better_____B.
About the Same in a Civilian and Military Job_____C.
Civilian Job Would Be Slightly Worse_____D.
Civilian Job Would Be A Lot Worse_____E.

WORK CONDITIONS	A	B	C	D	E
The immediate supervisors	X	X	X	X	X
Having a say in what happens to me	X	X	X	X	X
The retirement benefits	X	X	X	X	X
The medical benefits	X	X	X	X	X
The chance for interesting and challenging work	X	X	X	X	X
The wages and salaries	X	X	X	X	X
The chance for promotion	X	X	X	X	X
The opportunities for training	X	X	X	X	X
The people I work with	X	X	X	X	X
the work schedule and hours of work	X	X	X	X	X
The job security	X	X	X	X	X
The equipment I would use on the job	X	X	X	X	X
The location of the job	X	X	X	X	X

103. Suppose you left the service NOW. How do you think the total military compensation you are receiveing now (pay and benefits) would compare with the total compensation (pay and benefits) you would receive in a civilian job? (Mark one)

A lot more in the military_____01
A little more in the military_____02
About the same in a military and civilian job_____03
A little more in civilian life_____04
a lot more in civilian life_____05

I have no idea what I could earn in civilian life_____06

104. How much do you agree or disagree with each of the following statements about military life?

STRONGLY AGREE_____1
AGREE_____2
NEITHER AGREE NOR DISAGREE_____3
DISAGREE_____4
STRONGLY DISAGREE_____5

A. Life in the military is about what I expected it to be__1___2____3____4___5

B. Military personnel in the future will not have as good retirement benefits as I have now_____1___2____3____4___5

C. My military pay and benefits will not keep up with inflation_____1___2____3____4___5

D. My family would be better off if I took a civilian job_____1___2____3____4___5

105. Now, taking all things together, how satisfied or dissatisfied are you with the military as a way of life? Mark the number which shows your opinion.

Very Dissatisfied Very Satisfied

1____2____3____4____5____6____7

106. Record the time now- enter military hour:

---

107. How long did it take you to complete this questionnaire?

# of minutes

108. Did you complete this survey during a group administration where other people were taking the same survey?

Yes_____1
No_____0

109. Did you complete this survey on your own (off-duty) time or while on-duty?

Off-Duty_____1
On-Duty_____2
Part while on-duty and
part while off-duty_____3

110. We're interested in any comments or recommendations you would like to make about military policies--whether or not the topic was covered in this survey. Do you have any comments?

Yes__Specify in Space Below__1
No_____0

_____
_____
_____
_____

Source: [Ref. 10]

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